



Instruction Booklet

for the
18th World Sudoku Championship

We gratefully acknowledge the support of our sponsors:





SCHEDULE FOR THE 18TH WORLD SUDOKU CHAMPIONSHIP

Round	Name	Type	Duration	Points	From	To
Day 1 – Monday, 22 nd September						
R01	Road to Eger!	Individual	30	300	9:00	9:30
R02	Classic Sprint	Individual	20	200	9:40	10:00
R03	Parity Party	Individual	40	400	10:15	10:55
R04	Halved Squares	Individual	50	500	11:10	12:00
Lunch Break						
R05	Small World	Individual	40	390	13:45	14:25
R06	Calculated Fun	Individual	45	450	14:30	15:15
R07	Spot One!	Individual	50	400	15:30	16:20
Coffee Break						
R08	Circle of Sudoku	TEAM	45	1800	17:00	17:45
R09	The Patchwork Challenge	TEAM	45	1800	18:00	18:45
Day 2 – Tuesday, 23 rd September						
R10	Classic Uphill	Individual	40	400	9:00	9:40
R11	The Sudoku Pyramid	Individual	40	300	9:45	10:25
R12	Sudoku Mix	Individual	80	800	10:40	12:00
Lunch Break						
R13	Weakest Link Revised	Individual	45	1800	13:45	14:30
R14	Utter Chaos	Individual	45	1800	14:45	15:30

Competition Rules

Individual Scoring

If the solution exactly matches the official solution, the indicated score is awarded. If there are 1–5 incorrect cells, the player receives 60% of the points for that puzzle. Round 7 and 11 have their own rules for partial points.

In each individual round, a 10-point bonus is awarded for every full minute remaining if all puzzles are solved without mistakes. If there are minor errors in at most 2 puzzles (i.e., they earn partial credit), the player receives 60% of the base time bonus.

Team Scoring

In each team round, it is possible to earn partial points according to the scoring system specified for that round.

In each team round, a 40-point bonus is awarded for every full minute remaining if all puzzles are solved without mistakes. In the case of minor errors, as specified in detail for the given round, the team receives 60% of the base time bonus.

An important change this year is that we are placing greater emphasis on team points when determining the team competition results. Individual scores will be divided by 5 before being counted toward the team standings. This means that the individual scores of a team will be roughly equivalent to the points from one team round.

Play off

This year, there will be no playoff. Individual competitors will be ranked based on their results across the 10 individual rounds.

Competition Hall Rules

This Rules are copied from IB of WSC 2023. All changes are marked with bold.

1. All competitors have to sit at their pre-allocated desk in individual rounds. Teams have to work at their pre-allocated desk area for team rounds.
2. Prior to the start of each round, competitors must ensure they are at their desks ready for the start of the round. Late arrivals may not be permitted to enter the competition hall to take part in a round (at the discretion of the organizers).
3. Prior to the start of each round, competitors should clearly write their name, team **and competitor ID** on the front page of their competition booklet in the allocated space. If this information is not complete, then the organizers reserve the right not to award any points to that competitor for that round.
4. Competitors must not open their booklets before the official start of the round. Only when the signal for the start of the round has been given, competitors may open their booklets and begin solving the puzzles.
5. During each individual round, competitors have to keep silent, unless declaring completion of a round.
6. During team rounds (**except for team round 13**), team members may talk to each other, but should do this with respect to other teams.
7. Puzzles can be completed in any order within a round. The point value of a puzzle is an indication of its expected difficulty, although individual solving experience may differ. The difficulty of an example puzzle does not necessarily reflect the difficulty of the corresponding competition puzzle.

8. The official puzzle booklets will not contain puzzle examples. Competitors are allowed (and encouraged) to bring the Instruction Booklet to their desk as it contains examples for almost every puzzle which will be part of the championship.

9. When a competitor believes that there is a problem with a puzzle, they must clearly state that puzzle is wrong by writing "Wrong puzzle" next to it. The competitor must not notify the organizers during the round.

This will be investigated upon completion of the round.

10. To declare a round complete, a competitor must close their booklet, clearly state "finished" and raise their arm with the booklet. The competitor's arm must be raised until the booklet is collected. The same rules apply for the team competition.

11. Competitors or teams who complete a round with more than five minutes in advance, are allowed to leave the competition hall quietly. However, competitors or teams who complete a round with five minutes or less left are not allowed to leave their desks or tables in order to cause no unnecessary disruption to fellow competitors.

12. If a competitor leaves the competition hall for any reason, they may not be allowed to continue in that round (at the discretion of the organizers).

13. When the signal is given that the round is finished, competitors have to stop solving immediately, close their booklets, put their pens or pencils down and remain seated until all booklets have been collected.

The signal to get up and leave will be given by the supervisor.

14. Mobile phones and electronic devices are not permitted to use in the competition hall. The devices have to be turned off and must not be placed on the competitor's desk.

15. Only team captains and official observers equipped with a name tag are allowed to enter the competition hall while either individual or team rounds are taking place. Other non-competing participants may enter the competition hall at the discretion of the organizers.

16. Competitors may not use cameras or other recording devices during rounds. Only official observers may do so, at the discretion of the organizers. They have to respect the competitors and not use flash photography or cameras with excessive sounds.

17. There will be a few short breaks (about 5 minutes). Please remain at your seat. As soon as we have collected the booklets, we will immediately begin distributing the next ones.

Permitted items

1. Permitted items which can be used in the competition hall are: pens and pencils (except that no red pens can be used), pencil sharpeners, erasers, rulers, and instruction booklets annotated with notes. **If red pencils causes any problems during the checking process, we will announce that it is banned for the rest of the WSC and the entire WPC.**

2. Drinks and snacks are permitted as long as they do not disturb other competitors with a strong smell or rustling packet.

3. It is strictly forbidden to use electronic devices such as music players and headphones or any type of calculator. Use of such equipment may lead to the disqualification of the competitor.

4. Any other items brought into the hall must be kept in a bag on the floor and placed under the competitor's desk, so as not to block the aisles.

5. Blank paper, including preprinted square and non square grids, is permitted.

Acknowledgements

This booklet and the other material in the Championship is a result of the teamwork of a large number of individuals.

Puzzle authors

In alphabetical order:

György Herke	Pál Madarassy
Zoltán Horváth	László Osvált
Károly Kresz	Viktor Samu
Ashish Kumar	Gyula Slenker

The authors are indicated in this Instruction Booklet and the Solution Booklet.

Reviews & Testing

In alphabetical order, in addition to the names above:

Jeffrey Bardon	Viktor Lapis
Sam Capplemann-Lynes	Takeya Saikachi
Zoltán Gyimesi	Katalin Stelmár
Anikó Kozics	Péter Szentkúti
Ashish Kumar	

Technical Support

All grids (with the exception of Cube Sudoku) for this WSC were prepared using puzzle software developed by Logesz Co. The primary developers of the software are Gyula Slenker and Zoltán Horváth.

Sample puzzles

Most of the figures in this booklet were copied from previous WSC and Sudoku GP instruction booklets. The source is indicated in each case. Where no source is given, the puzzles are original creations made specifically for this competition.

Editor

Zoltán Horváth

ROUND 01	Road to Eger!	
Individual round	30 minutes 9:00 – 9:30	300 points

Page 1	2011	Shifted Sudoku	50 points
Page 2	2012	Pinocchio Sudoku	30 points
	2013	Pyramid Sudoku	30 points
Page 3	2014	Surplus Sudoku	50 points
	2015	Cube Sudoku	35 points
	2016	Mirror Sudoku	20 points
Page 4	2017	Coded Sudoku	40 points
	2018	Greater than Sudoku	35 points
	2019	0-9 Kropki Sudoku	65 points
Page 5	2022	Thermo Sudoku	30 points
	2023	Killer Sudoku	35 points
	2024	Parity Lines Sudoku	45 points
Page 6	2025	Shape Sudoku	60 points

Overview

This round features Sudoku variants from past WSCs, starting with Eger 2011 up to the current championship. **Solvers must complete one puzzle per page.** The first and last Sudoku is mandatory; on the second page you may choose between the 2012 and 2013 puzzles, and so on.

This is a medley round: each solved Sudoku provides information needed for the sudokus on the following page. Without that information, the next puzzle may or may not have a unique solution.

We mark these cells with letters. The first Sudoku contains the letters A, B, and C. The Sudoku puzzles on the second page all contain A, B, C, and D, E, F. After filling in the A, B, and C cells, the Sudoku puzzle will have a unique solution. You can then carry on with D, E, and F on the third page, and so on.

Scoring

If a solver completes more than one puzzle on the same page, only the highest score will be counted. A correctly solved Sudoku will earn its points even if the solver did not complete any puzzle on the previous page.

Competitors can receive bonus points if they have solved at least one puzzle on every page and none of their puzzles contain more than five errors.

On pages 4 and 5, the puzzles have been slightly overvalued: each of these puzzles is worth 10 points more than its difficulty. The final puzzle is overvalued by 20 points.

Page 1 / Sudoku 2011 – Shifted Sudoku [50 points]

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, each given clue number indicates that the digit must match at least one of its orthogonal neighbors. The gray cells only serve an aesthetic purpose.

Note: Back in 2011, this puzzle appeared as a standalone manipulated sudoku round, featuring pictures of Budapest attractions.

8	1	2	7	3	9	9	5	7
3								4
3		5	4	4	4	7		1
8		7				3		8
4		1				5		8
9		6				7		7
4		8	4	9	1	8		1
7								2
2	1	3	4	9	3	5	1	9



⁸ 1	¹ 5	² 7	⁷ 2	³ 8	⁹ 3	⁹ 6	⁵ 9	⁷ 4
³ 8	3	6	1	4	9	2	5	⁴ 7
³ 2	9	⁵ 4	⁴ 5	⁴ 6	⁴ 7	⁷ 3	1	¹ 8
⁸ 3	8	⁷ 1	7	5	4	³ 9	6	⁸ 2
⁴ 9	7	¹ 5	6	2	1	⁵ 4	8	⁸ 3
⁹ 4	6	⁶ 2	3	9	8	⁷ 5	7	⁷ 1
⁴ 6	4	⁸ 9	⁴ 8	⁹ 1	¹ 2	⁸ 7	3	¹ 5
⁷ 5	1	3	4	7	6	8	2	² 9
² 7	¹ 2	³ 8	⁴ 9	⁹ 3	³ 5	⁵ 1	¹ 4	⁹ 6

Page 2 / Sudoku 2012 – Pinocchio Sudoku [30 points]

[Károly Kresz]

Standard sudoku rules apply. Additionally, three numbers are highlighted. Two of them are correct, but the third, Pinocchio, is incorrect.

⁹ 9	1			4	5	2	6	
								⁹ 9
4	2		3			7		
		3		6			7	
6		⁹ 9				5		8
	4			7		1		
		7			6		5	2
8								
	5	2	4	3			8	7



⁹ 9	¹ 1	8	7	4	5	2	6	3
7	3	5	6	1	2	8	4	⁹ 9
⁴ 4	² 2	6	³ 3	9	8	⁷ 7	1	5
2	8	³ 3	5	⁶ 6	1	9	⁷ 7	4
⁶ 6	7	¹ 1	9	2	4	⁵ 5	3	⁸ 8
5	⁴ 4	9	8	⁷ 7	3	¹ 1	2	6
3	9	⁷ 7	1	8	⁶ 6	4	⁵ 5	² 2
⁸ 8	6	4	2	5	7	3	9	1
1	⁵ 5	² 2	⁴ 4	³ 3	9	6	⁸ 8	⁷ 7

Example from IB of WSC 2012

Page 2 / Sudoku 2013 – Pyramid Sudoku [30 points]

[Karoly Kresz]

Standard sudoku rules apply. Additionally, all digits must be distinct in shaded regions.

7		3						1
	8		5				9	
		9				7		4
			8		6		2	
				4				
	2		3		7			
4		2				5		
	7				8		1	
5						4		7



7	6	3	9	8	4	2	5	1
2	8	4	5	7	1	6	9	3
1	5	9	6	2	3	7	8	4
9	4	7	8	1	6	3	2	5
6	3	1	2	4	5	8	7	9
8	2	5	3	9	7	1	4	6
4	1	2	7	6	9	5	3	8
3	7	6	4	5	8	9	1	2
5	9	8	1	3	2	4	6	7

Page 3 / Sudoku 2014 – Surplus Sudoku [50 points]

[Karoly Kresz]

Standard sudoku rules apply. Additionally, regions that have at least as many cells as the grid size must have every digit appear in them.

Note: There are no regions between sizes 2 and N-1.

4		5			
	5				
3					
					4
				2	
			3		1



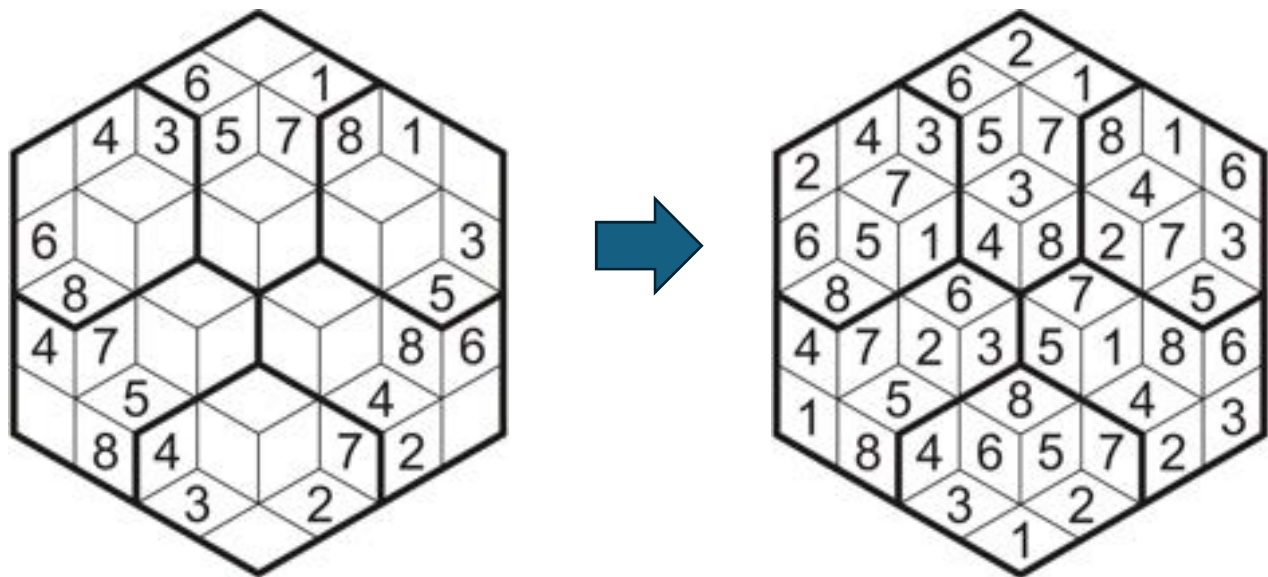
4	3	5	6	1	2
2	5	4	1	6	3
3	2	1	5	4	6
5	1	6	2	3	4
1	6	3	4	2	5
6	4	2	3	5	1

Example from Thomas Snyder, IB of WSC 2011

Page 3 / Sudoku 2015 – Cube Sudoku [35 points]

[Karoly Kresz]

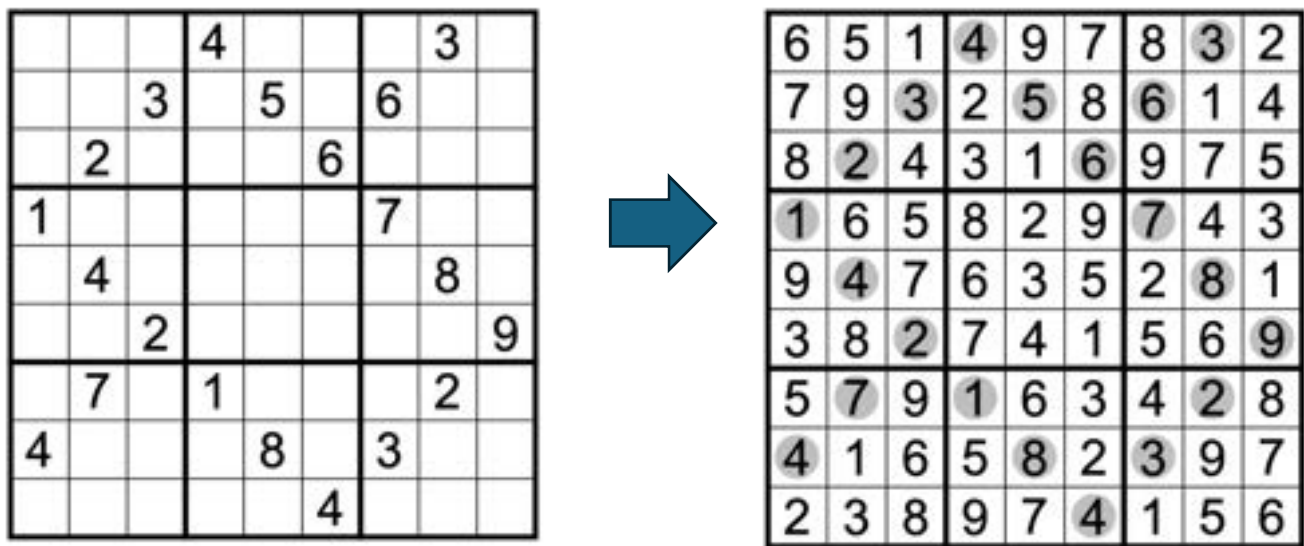
Standard sudoku rules apply. Additionally, rows in Cube Sudoku pass through opposite parallel sides of each quadrilateral; in other words, the rows bend across the surface of the apparent cube(s) to travel in a “straight” line.



Page 3 / Sudoku 2016 – Mirror Sudoku [20 points]

[Karoly Kresz]

Standard sudoku rules apply. Additionally, numbers placed in two opposite corner 3x3 squares must be symmetric about the center of the grid.

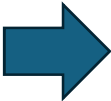


Page 4 / Sudoku 2017 – Coded Sudoku [40 points]

[Karoly Kresz]

Standard sudoku rules apply. Additionally, some cells contain letters. All instances of the same letter must be replaced with the same digit, and all instances of different letters must be replaced with different digits.

		C		8	4			
	S			5	2		C	
W		2	6			S		
		4	3		W		6	1
1	7						9	3
6	9		C		1	8		
		S			9	6		C
	W		4	6			S	
			2	1		W		



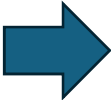
9	3	7	1	8	4	2	5	6
4	1	6	9	5	2	3	7	8
5	8	2	6	7	3	1	4	9
8	2	4	3	9	5	7	6	1
1	7	5	8	2	6	4	9	3
6	9	3	7	4	1	8	2	5
2	4	1	5	3	9	6	8	7
3	5	8	4	6	7	9	1	2
7	6	9	2	1	8	5	3	4

Example from IB of WSC 2017

Page 4 / Sudoku 2018 – Greater than Sudoku [35 points]

[Karoly Kresz]

Standard sudoku rules apply. Additionally, all digits should follow the given inequality signs.



6	>	2	>	1	5	>	3	<	8	9	>	7	>	4
7	<	9	>	5	1	<	4	<	6	3	<	8	>	2
3	<	8	>	4	2	<	9	>	7	5	>	1	<	6
5	<	6	<	7	4	>	2	<	9	1	<	3	<	8
9	>	3	>	2	6	<	8	>	1	4	<	5	<	7
1	<	4	<	8	7	>	5	>	3	6	>	2	<	9
2	>	1	<	6	3	<	7	>	4	8	<	9	>	5
4	<	5	<	9	8	>	1	<	2	7	>	6	>	3
8	>	7	>	3	9	>	6	>	5	2	<	4	>	1

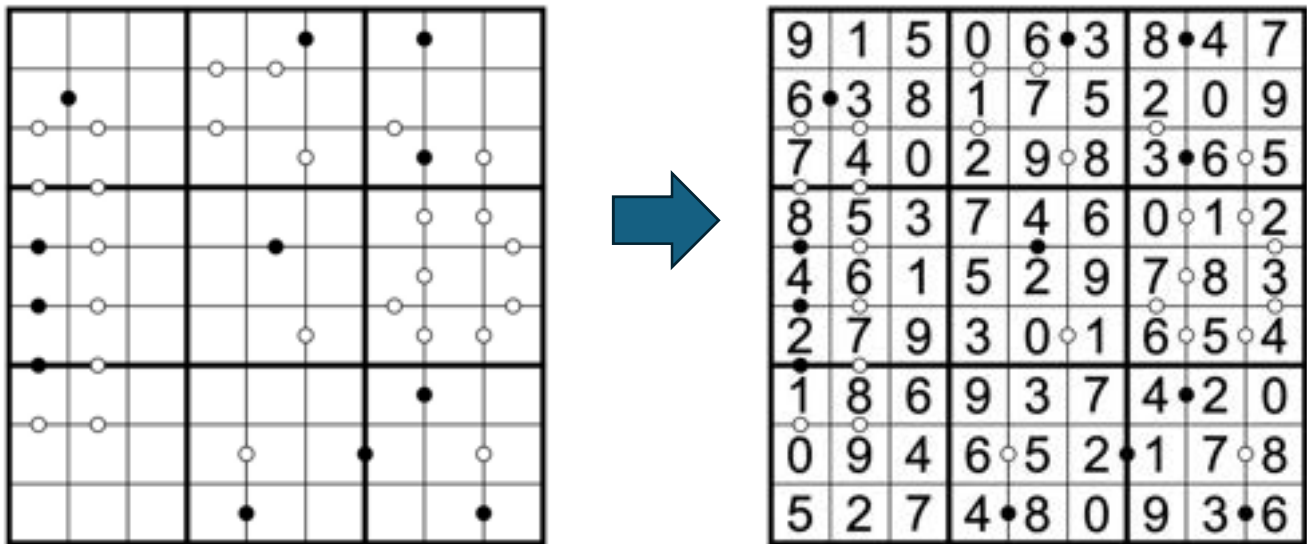
Example from IB of WSC 2018

Page 4 / Sudoku 2019 – 0-9 Kropki Sudoku [65 points]

[Karoly Kresz]

Place a digit from 0 to 9 into each of the empty cells, so that no digit repeats in any row, column or outlined 3×3 box.

Additionally, if absolute difference between two digits in neighboring cells equals 1, then those cells are separated by a white dot. If a digit in a cell is half of the digit in a neighboring cell, then those cells are separated by a black dot. All possible dots are given, but the dot between 1 and 2 can be either white or black.

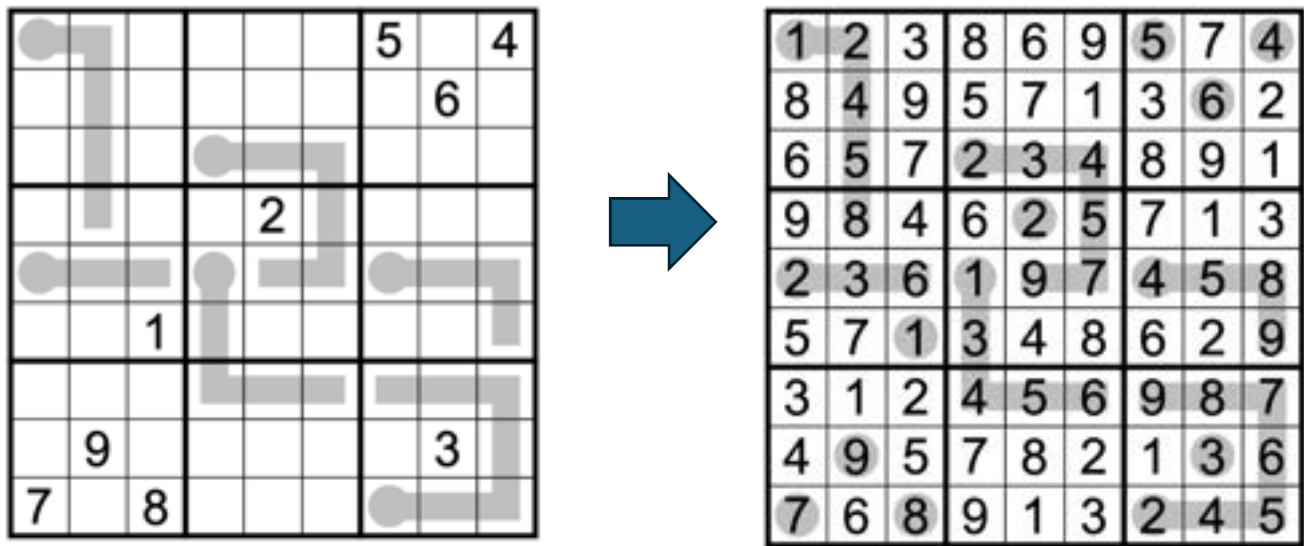


Example from IB of WSC 2019

Page 5 / Sudoku 2022 – Thermo Sudoku [30 points]

[Karoly Kresz]

Standard sudoku rules apply. Additionally, some thermometer shapes are in the grid; numbers must be strictly increasing from the bulb to the flat end.

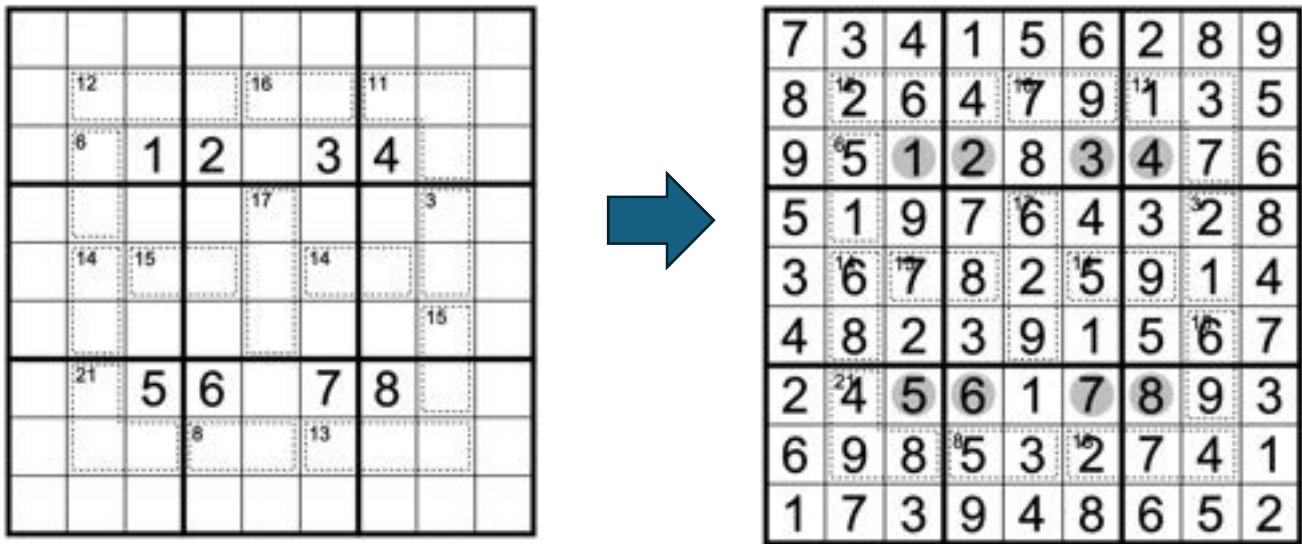


Example from IB of WSC 2023

Page 5 / Sudoku 2023 – Killer Sudoku [35 points]

[Karoly Kresz]

Standard sudoku rules apply. Additionally, the sum of the numbers in each cage must equal the value given in the upper-left corner of that cage. Numbers cannot repeat inside a cage.

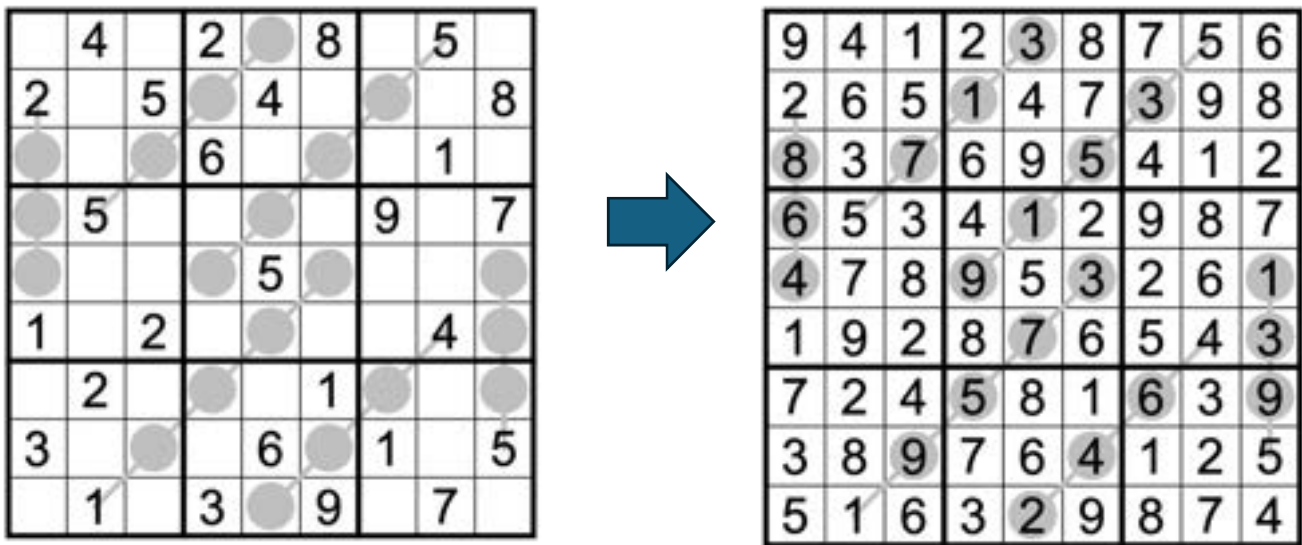


Example from IB of WSC 2023

Page 5 / Sudoku 2024 – Parity Lines Sudoku [45 points]

[Karoly Kresz]

Standard Sudoku rules apply. Additionally, Tanghulus appear in the grid. A Tanghulu is a traditional Chinese snack made of fruits (often hawthorns) skewered on a stick. In the puzzle, each Tanghulu consists of one “stick cell” and several “fruit cells” in a straight line. Every fruit cell must contain a digit with the same parity (odd or even) as the digit in the stick cell.



Example from IB of WSC 2024

Standard sudoku rules apply. Additionally, there are some numbered shapes that must be put into the grid. Shapes can be rotated, but cannot be reflected.

		9			2		
	8					6	
6							9
			1		5		
			2		6		
			3		7		
9							2
	2					9	
		1			5		

3 3 4
4 4 6

7 7 1
8 8 3

8 5 6
9 2 3



7	1	9	6	5	8	2	3	4
2	8	4	7	3	9	1	6	5
6	3	5	4	1	2	8	7	9
3	6	8	1	4	5	9	2	7
1	9	7	2	8	6	4	5	3
4	5	2	3	9	7	6	1	8
9	4	3	5	6	1	7	8	2
5	2	6	8	7	4	3	9	1
8	7	1	9	2	3	5	4	6

Example from IB of WSC 2023

ROUND 02	Classic Sprint	
Individual round	20 minutes 09:40 – 10:00	200 points

Classic Sudoku	10 points	10 points	15 points
	15 points	15 points	15 points
	15 points	20 points	20 points
	20 points	20 points	25 points

Sudoku 01-12 – Classic Sudoku

[Gyula Slenker, Károly Kresz, Zoltán Horváth]

Fill each empty cell with numbers from 1 to 9 so that each row, column, and outlined 3x3 box contains 1 to 9 exactly once.

2								6
			3		9			
		1		5		2		
	4		2		6		1	
		8		7		6		
	5		9		4		7	
		7		1		9		
			5		3			
3								1

➔

2	7	9	8	4	1	3	5	6
5	6	4	3	2	9	1	8	7
8	3	1	6	5	7	2	9	4
7	4	3	2	8	6	5	1	9
9	2	8	1	7	5	6	4	3
1	5	6	9	3	4	8	7	2
6	8	7	4	1	2	9	3	5
4	1	2	5	9	3	7	6	8
3	9	5	7	6	8	4	2	1

ROUND 03	Parity Party	
Individual round	40 minutes 10:15 – 10:55	400 points

- | | | |
|-----|-------------------------|------------------|
| 1. | Even / Odd Sudoku | 20 points |
| 2. | Even / Odd Sudoku | 20 points |
| 3. | Different Parity Sudoku | 40 points |
| 4. | Different Parity Sudoku | 65 points |
| 5. | Tic-tac-toe Sudoku | 25 points |
| 6. | Battenburg Sudoku | 30 points |
| 7. | First Even / Odd Sudoku | 40 points |
| 8. | First Even / Odd Sudoku | 55 points |
| 9. | Even Sandwich Sudoku | 45 points |
| 10. | Odd Labyrinth Sudoku | 60 points |

Overview

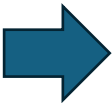
This round consists of ten Even / Odd Sudokus and their variants.

Sudoku 01-02 – Even / Odd Sudoku [20+20 points]

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, cells with a square contain an even number; cells with a circle contain an odd number.

	7		4			1		
8		3					5	
	2				7			3
1				2				
			7		6			
				9				8
6			9				7	
	3					6		1
		2			5		8	



5	7	6	4	8	3	1	2	9
8	1	3	2	6	9	4	5	7
9	2	4	1	5	7	8	6	3
1	4	9	5	2	8	7	3	6
3	5	8	7	4	6	9	1	2
2	6	7	3	9	1	5	4	8
6	8	1	9	3	4	2	7	5
4	3	5	8	7	2	6	9	1
7	9	2	6	1	5	3	8	4

Example from IB of WSC 2024

Sudoku 03-04 – Different Parity Sudoku [40+65 points]

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, each marked domino contains an odd and an even digit.

3				1				6
	4						7	
		5		9		8		
			6		8			
2		8				7		3
			3		1			
		6		4		3		
	5						2	
4				6				1



3	8	9	2	1	7	5	4	6
6	4	2	5	8	3	1	7	9
1	7	5	4	9	6	8	3	2
9	3	4	6	7	8	2	1	5
2	1	8	9	5	4	7	6	3
5	6	7	3	2	1	4	9	8
8	9	6	1	4	2	3	5	7
7	5	1	8	3	9	6	2	4
4	2	3	7	6	5	9	8	1

Sudoku 05 – Tic-tac-toe Sudoku [25 points]

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, in any 3×3 region, there cannot be three even or three odd numbers in a straight line — that is, horizontally, vertically, or along either of the two diagonals.

9				5				7
	1		3		2		4	
		6				2		
	4			2			6	
6			4		5			2
	3			1			9	
		8				7		
	5		1		7		2	
1				9				3



9	2	4	6	5	1	8	3	7
8	1	5	3	7	2	9	4	6
3	7	6	8	4	9	2	5	1
7	4	1	9	2	8	3	6	5
6	8	9	4	3	5	1	7	2
5	3	2	7	1	6	4	9	8
2	9	8	5	6	3	7	1	4
4	5	3	1	8	7	6	2	9
1	6	7	2	9	4	5	8	3

Sudoku 06 – Battenburg Sudoku [30 points]

[György Herke]

Standard sudoku rules apply. Additionally, everywhere a 2x2 square forms a Checkerboard pattern of Odd and Even digits a Battenburg marking is given. All possible Battenburg markings have been given.

							4	9
			1	2			7	
		3	5					
					1	8		
4	5				3	6		
7								



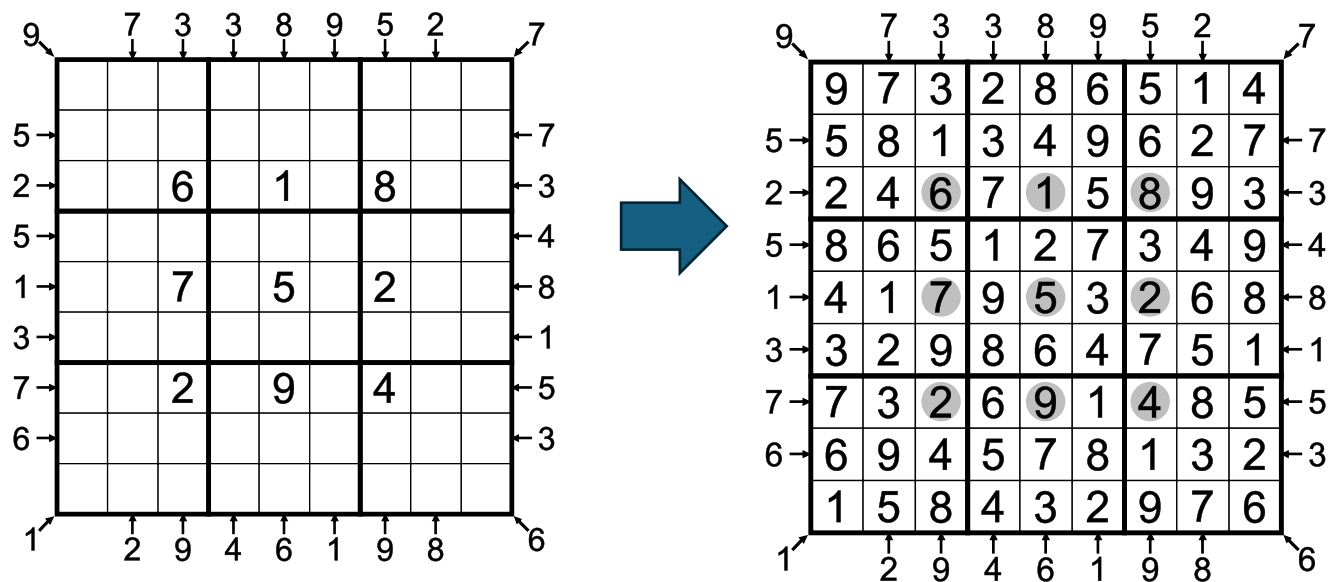
9	3	4	1	5	7	2	6	8
5	7	2	8	3	6	1	4	9
8	6	1	2	9	4	5	7	3
6	4	3	5	7	8	9	2	1
1	8	5	9	6	2	4	3	7
2	9	7	3	4	1	8	5	6
4	5	9	7	8	3	6	1	2
7	1	8	6	2	5	3	9	4
3	2	6	4	1	9	7	8	5

Example from Bram de Laat

Sudoku 07-08 – First Even / Odd Sudoku [40+55 points]

[Zoltán Horváth]

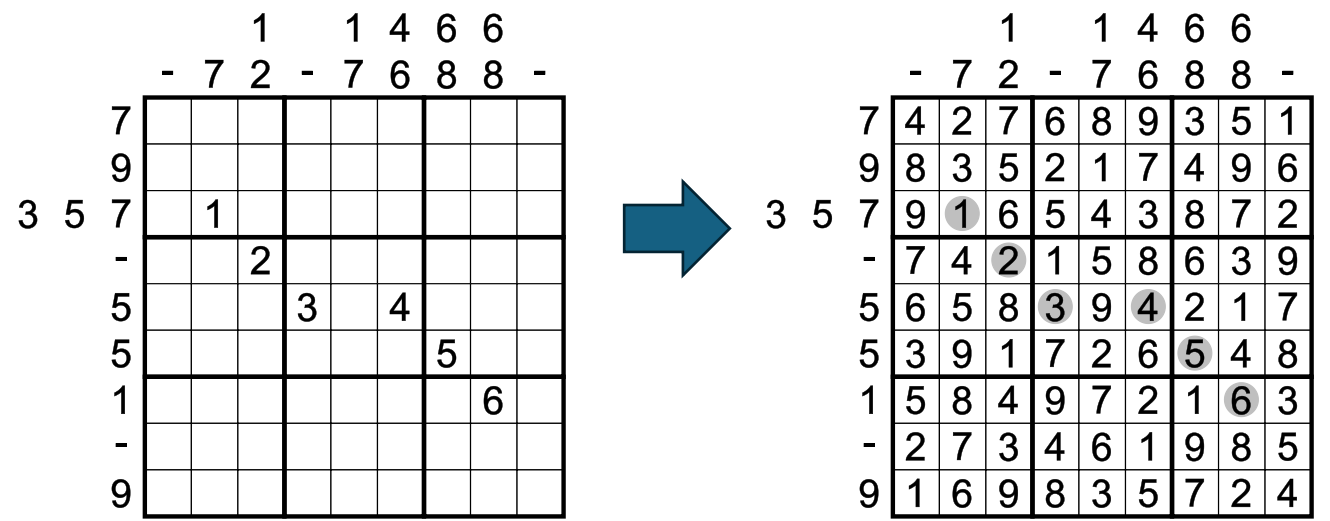
Standard sudoku rules apply. Additionally, the outside clues indicate the first even or odd digit in the direction of the arrow.



Sudoku 09 – Even Sandwich Sudoku [45 points]

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, the clues outside the grid indicate all numbers in that row or column surrounded by even numbers on both sides ("sandwiched"). Clues can be given in any order, and all such numbers are given. If a clue is a '-', then no values in that row or column are sandwiched between two even numbers.



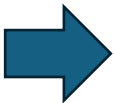
Example from Sudoku GP 2024-R8 IB

Sudoku 10 – Odd Labyrinth Sudoku [60 points]

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, there has to be at least one path that runs from the left top corner to the right bottom corner over cells that contain odd digits. This path can only travel horizontally and vertically.

①					9		5	
2		4				8		7
		6			8		9	
						3		6
4		5						
	3		5			4		
7		9				5		8
	6		2					⑨



①	7	8	4	2	9	6	5	3
2	9	4	3	6	5	8	1	7
3	5	6	1	7	8	2	9	4
9	1	7	8	5	2	3	4	6
6	2	3	7	4	1	9	8	5
4	8	5	9	3	6	1	7	2
8	3	2	5	9	7	4	6	1
7	4	9	6	1	3	5	2	8
5	6	1	2	8	4	7	3	⑨

Example from Sudoku GP 2023-R5 IB

ROUND 04	Halved Squares	
Individual round	11:10 – 12:00 50 minutes	500 points

- | | | |
|----|-----------------------|-------------------|
| 1. | Halved Squares Sudoku | 30 points |
| 2. | Halved Squares Sudoku | 45 points |
| 3. | HS Outside Sudoku | 35 points |
| 4. | HS Outside Sudoku | 85 points |
| 5. | HS Thermo Sudoku | 20 points |
| 6. | HS Thermo Sudoku | 80 points |
| 7. | HS Killer Sudoku | 60 points |
| 8. | HS Killer Sudoku | 145 points |

Overview

This round consists of Halved Squares Sudokus and their variants. Each type includes two puzzles: one 6×6 and one 9×9.

Scoring

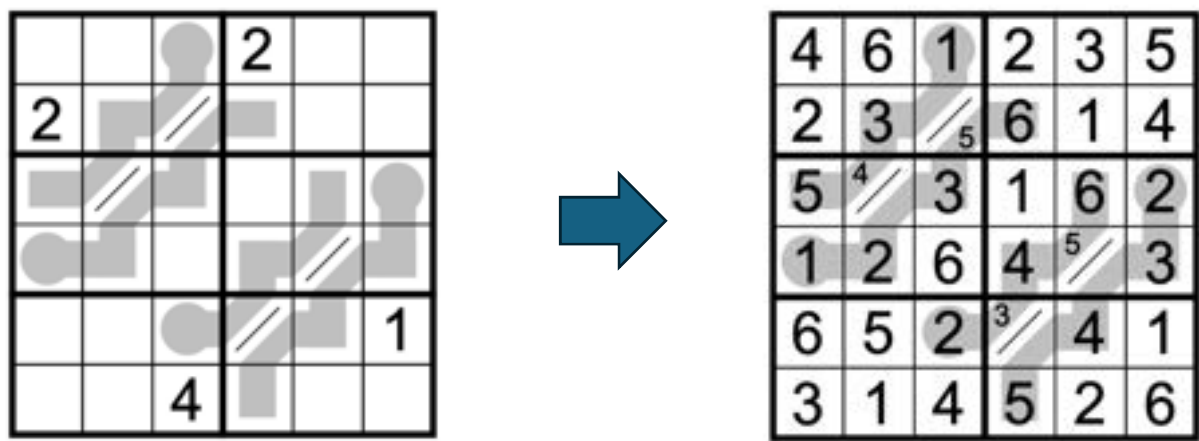
If the correct digit is written in a split cell but placed on the wrong side of the dividing line—or if it's ambiguous which side it belongs to—it will be counted as incorrect.

No cell can incur more than one penalty point.

Sudoku 05-06 – HS Thermo Sudoku [20+80 points]

[Viktor Samu]

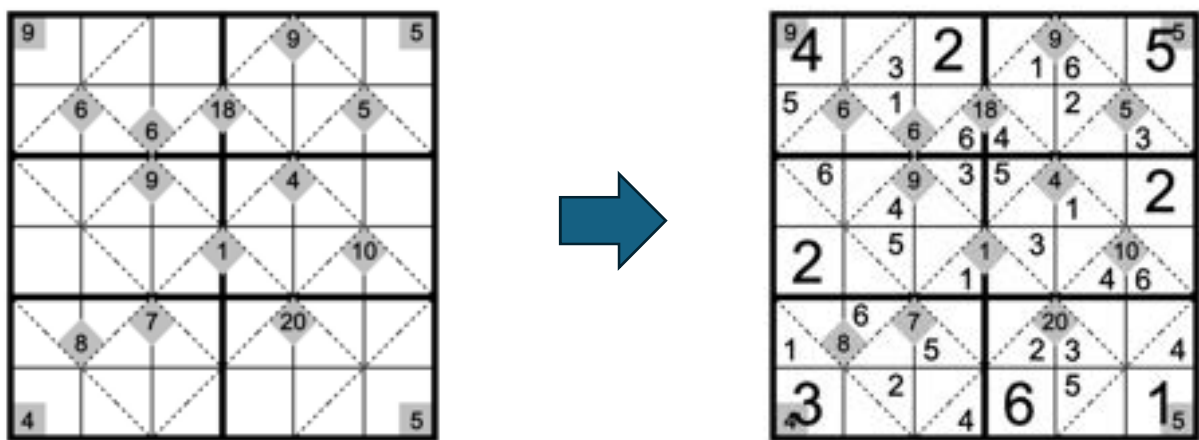
Standard sudoku rules apply. Some thermometer shapes are placed in the grid; digits must strictly increase from the round bulb to the flat end. Some cells are divided in half by a diagonal and belong to two different thermometers. In each such cell, exactly one of the two halves must contain a digit.



Sudoku 07-08 – HS Killer Sudoku [60+145 points]

[Zoltán Horváth, Pál Madarassy]

Standard sudoku rules apply. Additionally, the sum of the digits in each cage must equal the value given in its grey cell. Digits may not repeat within a cage. Some cells are divided in half by a diagonal and belong to two different cages. In each such cell, exactly one of the two halves must contain a digit.



ROUND 05	Small World	
Individual round	40 minutes 13:45 – 14:25	390 points

Small World 1.	Search 6	– Irregular	25 + 25 points
	Thermo	– Arrow	25 + 25 points
	Kropki Pairs	– Clock	25 + 25 points
Small World 2.	Deficit	– Surplus	25 + 25 points
	Clone	– Same Neighbours	25 + 25 points
	Diagonally NC	– Palindrome	25 + 25 points
Extra	Irregular Sudoku		15 + 15 points
			15 + 15 points
			15 + 15 points

Overview

This round contains only 6×6 puzzles.

The first two sets of six Sudokus are connected by the following rule: the same digit cannot appear in the same position across all six puzzles in the set.

The third set of six Sudokus is independent. These are bonus puzzles, intended for solvers who have completed both main sets, finished one set but don't have enough time to start the other, or simply want to solve them freely. Note that the sudokus on page 3 have been slightly undervalued.

Note: The example puzzles are independent and not linked; each one illustrates its own genre separately.

Small World 1 / 1 – Search 6 Sudoku [25 points]

[Gyula Slenker]

Standard sudoku rules apply.
Additionally, the given arrows point to the number six in that row or column, and the digits on the arrows show the distance.

→	5				
		→			
	↑				↓
	→			2	
↑			↑		



1	6	2	5	3	4
4	5	3	2	6	1
5	2	1	6	4	3
6	3	4	1	5	2
3	1	6	4	2	5
2	4	5	3	1	6

Small World 1 / 2 – Irregular Sudoku [25 points]

[Gyula Slenker]

Standard sudoku rules apply.
In this variation, the regions are irregularly shaped.

	1				
			3	2	
6					5
					4



4	1	5	2	3	6
1	3	6	5	4	2
5	6	4	3	2	1
6	2	3	4	1	5
3	5	2	1	6	4
2	4	1	6	5	3

Small World 1 / 3 – Thermo Sudoku [25 points]

[Gyula Slenker]

Standard sudoku rules apply.
Additionally, some thermometer shapes are in the grid; numbers must be strictly increasing from the bulb to the flat end.

Example is available in Round 01.

Small World 1 / 4 – Arrow Sudoku [25 points]

[Gyula Slenker]

Standard sudoku rules apply.
Additionally, some arrow shapes are in the grid; the sum of the numbers along the path of each arrow must equal the number in the circled cell. Numbers can repeat within an arrow shape.

2		○		↗	5
↙				○	
○				↗	
1		○			4



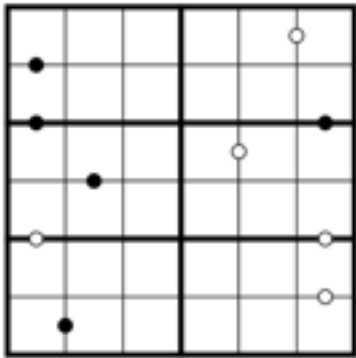
2	6	4	3	1	5
5	1	3	2	4	6
3	5	1	4	6	2
4	2	6	1	5	3
6	4	2	5	3	1
1	3	5	6	2	4

Small World 1 / 5 – Kropki Pairs Sudoku [25 points]

[Gyula Slenker]

Standard sudoku rules apply.

Additionally, if a white circle is given between two adjacent cells, then the two numbers in those cells must differ by 1. If a black circle is given between two adjacent cells, then the two numbers must have a ratio of 2. Pairs of cells without circles can have any relationship.



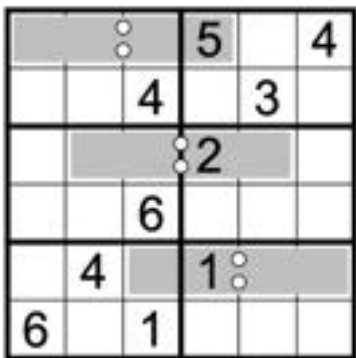
4	3	1	2	5	6
2	5	6	3	4	1
1	4	3	5	6	2
6	2	5	4	1	3
5	1	2	6	3	4
3	6	4	1	2	5

Small World 1 / 6 – Clock Sudoku [25 points]

[Gyula Slenker]

Standard sudoku rules apply.

Additionally, some digital clocks are shown. When the puzzle is completed, all clocks should display a valid time in a 24-hour format (HH:MM); i.e. a clock cannot display 43:65.

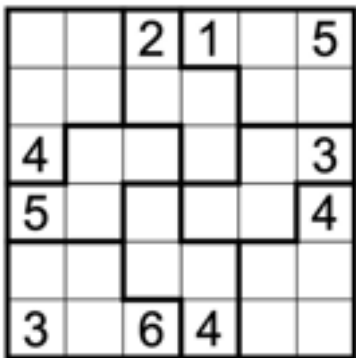


1	6	3	5	2	4
5	2	4	6	3	1
4	1	5	2	6	3
2	3	6	4	1	5
3	4	2	1	5	6
6	5	1	3	4	2

Small World 2 / 1 – Deficit Sudoku [25 points]

[Zoltán Horváth]

Fill each cell with the digits from 1 to 6. No digit may be repeated in any row, column, or bold-outlined area.



6	3	2	1	4	5
1	5	4	3	2	6
4	2	1	5	6	3
5	6	3	2	1	4
2	4	5	6	3	1
3	1	6	4	5	2

Small World 2 / 2 – Surplus Sudoku [25 points]

[Zoltán Horváth]

Fill each cell with the digits from 1 to 6 so that no number repeats in any row or column. Some regions appear with more cells than 6. Some number(s) repeat in these regions, but all numbers in the indicated range must appear at least once within each of these regions.

Example is available in Round 01.

Small World 2 / 3 – Clone Sudoku [25 points]

[Zoltán Horváth]

Standard sudoku rules apply.
Additionally, in each shaded region of the same shape, the numbers placed in corresponding cells of the regions must be the same.

	1			2	
					3
		3			
	5				4
2					



3	1	5	4	2	6
4	6	2	1	5	3
5	4	1	3	6	2
6	2	3	5	4	1
1	5	6	2	3	4
2	3	4	6	1	5

Small World 2 / 4 – Same Neighbours Sudoku [25 points]

[Zoltán Horváth]

Standard sudoku rules apply.
Additionally, shaded cells cannot have different neighbors on all sides. Not all cells with this property are necessarily shaded.

				1	
					2
		5		3	
	6		4		
3					
	5				



2	3	6	5	1	4
5	4	1	3	6	2
4	2	5	6	3	1
1	6	3	4	2	5
3	1	4	2	5	6
6	5	2	1	4	3

Small World 2 / 5 – Diagonally NC Sudoku [25 points]

[Zoltán Horváth]

Standard sudoku rules apply.
Additionally, digits placed in diagonally neighbouring cells must not be consecutive.

4					5
	2			1	
3					2



4	3	2	1	6	5
1	6	5	2	3	4
6	1	4	5	2	3
5	2	3	4	1	6
2	5	6	3	4	1
3	4	1	6	5	2

Small World 2 / 6 – Palindrome Sudoku [25 points]

[Zoltán Horváth]

Standard sudoku rules apply.
Additionally, the numbers formed by the digits on the grey lines are palindromes meaning they can be read equally in both directions.

6					
	5				6
1				2	
			5		
				3	
					2



6	3	1	2	4	5
4	5	2	3	1	6
1	6	5	4	2	3
2	4	3	5	6	1
5	2	6	1	3	4
3	1	4	6	5	2

Small World Extra – 13-18 Irregular Sudoku [15 points each]

[Gyula Slenker]

See Small World 1 / 2 !

ROUND 06	Calculated Fun	
Individual round	45 minutes 14:30 – 15:15	450 points

- | | | |
|----|---------------------------------|------------------|
| 1. | Killer Sudoku | 35 points |
| 2. | Arrow 0-8 Sudoku | 70 points |
| 3. | Before Nine Sudoku | 45 points |
| 4. | Upper Right Heavy Killer Sudoku | 70 points |
| 5. | Same Sum Sudoku | 70 points |
| 6. | Same Product Sudoku | 35 points |
| 7. | Multiplication Table Sudoku | 35 points |
| 8. | Dot Sum Sudoku | 90 points |

Sudoku 01 – Killer Sudoku [35 points]

[Zoltán Horváth]

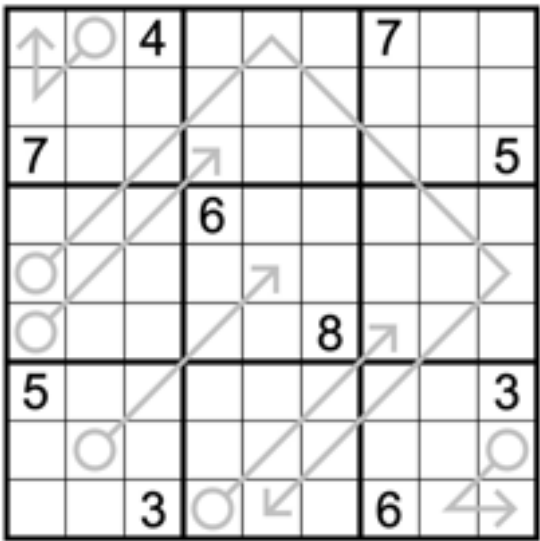
Standard sudoku rules apply. Additionally, the sum of the numbers in each cage must equal the value given in the upper-left corner of that cage. Numbers cannot repeat inside a cage.

Example is available in Round 01.

Sudoku 02 – Arrow 0-8 Sudoku [70 points]

[Zoltán Horváth]

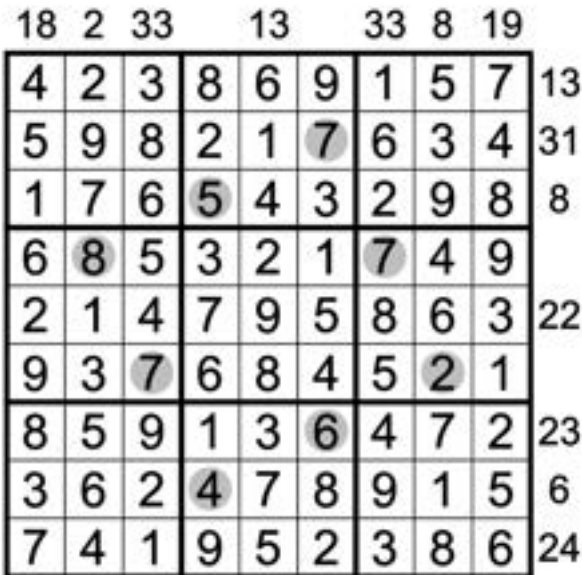
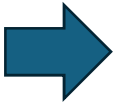
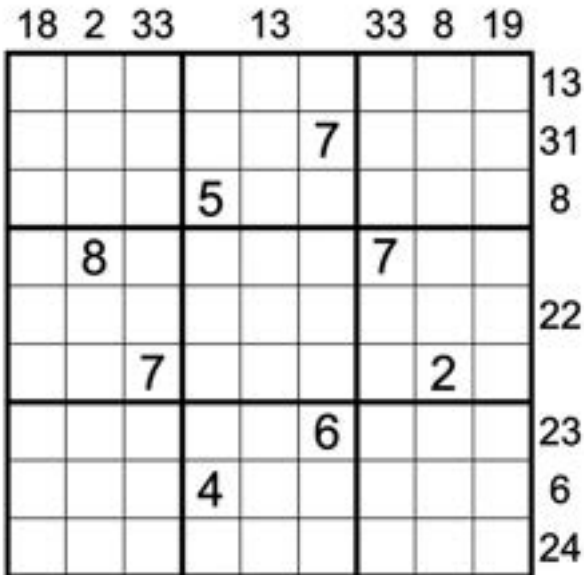
Place a digit from 0 to 8 into each of the empty cells, so that no digit repeats in any row, column or outlined 3×3 box. Additionally, some arrow shapes are in the grid; the sum of the numbers along the path of each arrow must equal the number in the circled cell. Numbers can repeat within an arrow shape.



Sudoku 03 – Before Nine Sudoku [45 points]

[Gyula Slenker]

Standard sudoku rules apply. Additionally, the clues outside the grid indicate the total sum of the digits that appear before the 9 in that row or column.



Sudoku 04 – Upper Right Heavy Killer Sudoku [70 points]

[Gyula Slenker]

Standard sudoku rules apply. Additionally, if a number in a cell is smaller than the number in the diagonally adjacent cell above to the right, that cell must contain a clue showing the sum of two numbers. Conversely, if a cell has no clue, its number cannot be smaller than the number in the diagonally adjacent upper-right cell.

			11				7	
	8			10	11			
			7	4				14
8	13			13				
		5	11	17	9	11		
10							10	7
	9	13	8	10				
				8	10	10	9	



3	8	2	7	9	1	5	4	6
9	4	7	2 ¹	5	6	8	1 ⁷	3
6	1 ⁸	5	8	4 ⁰	3 ¹	2	7	9
4	6	8	3 ⁷	1 ⁴	7	9	5 ⁴	2
2 ⁸	5 ³	3	4	6 ³	9	7	8	1
7	9	1 ⁵	5 ¹	8 ⁷	2 ⁹	3 ¹	6	4
1 ⁰	2	6	9	7	8	4 ⁰	3 ⁷	5
8	3 ⁹	4 ³	1 ⁸	2 ⁰	5	6	9	7
5	7	9	6	3 ⁸	4 ⁰	1 ⁰	2 ⁹	8

Example from IB of WSC 2024

Sudoku 05 – Same Sum Sudoku [70 points]

[Viktor Samu]

Standard sudoku rules apply. Additionally, the sum of the digits in each grey region must be identical. Determining this common sum is part of the puzzle. Digits can repeat within grey regions.

	7							
	5	2	6			9	4	8
	4						6	
							7	
				2				
	8							
	9						2	
6	2	7			4	3	1	
							8	

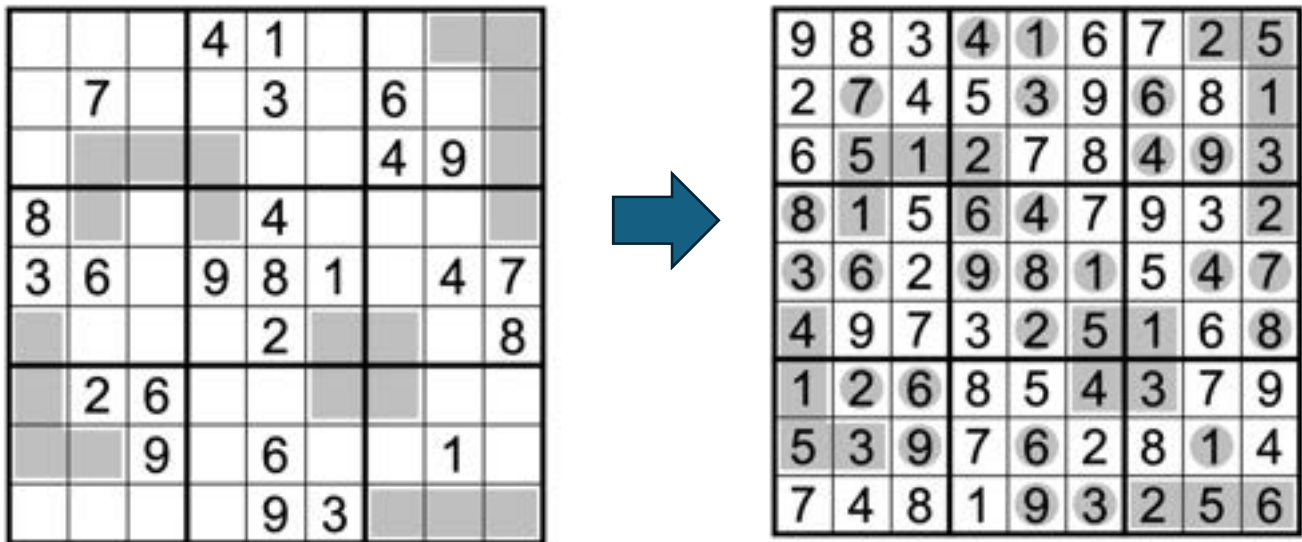


8	7	6	9	4	2	5	3	1
3	5	2	6	7	1	9	4	8
9	4	1	3	5	8	7	6	2
5	1	3	8	9	6	2	7	4
7	6	4	1	2	5	8	9	3
2	8	9	4	3	7	1	5	6
1	9	8	7	6	3	4	2	5
6	2	7	5	8	4	3	1	9
4	3	5	2	1	9	6	8	7

Sudoku 06 – Same Product Sudoku [35 points]

[Viktor Samu]

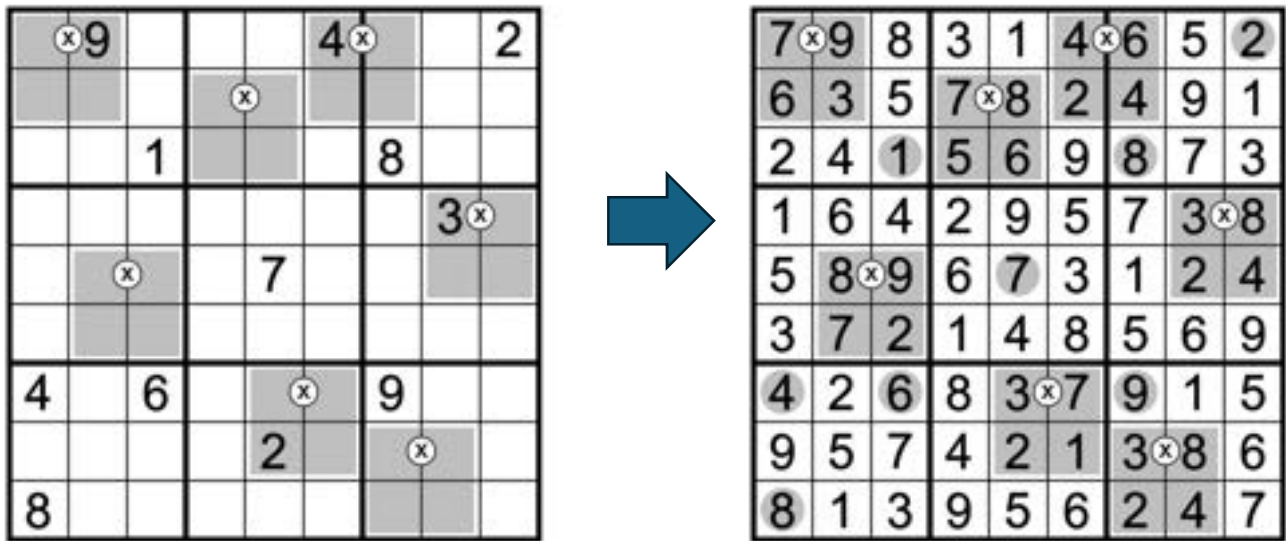
Standard sudoku rules apply. Additionally, the product of the digits in each grey region must be identical. Determining this common product is part of the puzzle. Digits can repeat within grey regions.



Sudoku 07 – Multiplication Table Sudoku [35 points]

[György Herke]

Standard sudoku rules apply. Additionally, for each marked square (containing four digits) the two bottom cells contain a two-digit number which is the product of the digits in the two upper cells. Not all possible 2x2 squared multiplications are necessarily given.

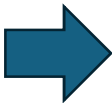


Sudoku 08 – Dot Sum Sudoku [90 points]

[György Herke]

Standard sudoku rules apply. Additionally, some dots are given. Each dot indicates that one of the four digits around it is the sum of the other three. Digits may repeat around a dot. Not all possible dots are shown.

8	2	3				5	7	9
1	5						4	3
4								6
		5		8		6		
7								8
5	3						6	2
9	1	8				3	5	4



8	2	3	6	4	1	5	7	9
1	5	6	9	2	7	8	4	3
4	7	9	3	5	8	2	1	6
6	8	1	5	9	2	4	3	7
3	9	5	7	8	4	6	2	1
2	4	7	1	6	3	9	8	5
7	6	2	4	3	5	1	9	8
5	3	4	8	1	9	7	6	2
9	1	8	2	7	6	3	5	4

ROUND 07		Spot One!
Individual round	50 minutes 15:30 – 16:20	400 points

- | | | |
|----|-----------------|-----------|
| 1. | Spot One Sudoku | 80 points |
| 2. | Spot One Sudoku | 80 points |
| 3. | Spot One Sudoku | 80 points |
| 4. | Spot One Sudoku | 80 points |
| 5. | Spot One Sudoku | 80 points |

Overview

[Round designed by Zoltán Horváth]

This round consists of five Sudoku puzzles. Each puzzle contains three marked 3×3 regions. You will receive them on separate sheets of paper inside an envelope, along with a helper grid.

Standard Sudoku rules apply. Across all puzzles, the marked regions form a total of seven **distinct** configurations. Furthermore, any two puzzles share exactly one identical grey region, with no rotation or reflection allowed.

It is optional to mark the possible regions on the helper grid.

Note: A configuration may appear in only one puzzle.

Scoring

For a completely solved sudoku, the indicated score is awarded. Otherwise, the score is calculated as correct cells minus incorrect cells, but no sudoku can receive less than 0 points.

Pre-filled or left blank cells are not counted as either correct or incorrect.

Example with 4 puzzles and 6 different 2x3 regions.

	3		2		5
5				4	
	2				
3					
			1		2
		1		3	

2		4			
	5				
4		1		6	
	2		3		4

		1			
4			5		
	6			4	
					1
		5			
			1		

		2			
			1		
2				5	
	4				1
		4			
1			3		



6	3	4	2	1	5
5	1	2	3	4	6
1	2	6	4	5	3
3	4	5	6	2	1
4	5	3	1	6	2
2	6	1	5	3	4

1	6	2	4	5	3
5	4	3	6	2	1
2	1	4	5	3	6
3	5	6	1	4	2
4	3	1	2	6	5
6	2	5	3	1	4

2	5	1	6	3	4
4	3	6	5	1	2
1	6	2	3	4	5
5	4	3	2	6	1
6	1	5	4	2	3
3	2	4	1	5	6

4	1	2	5	3	6
6	3	5	1	4	2
2	6	1	4	5	3
5	4	3	2	6	1
3	2	4	6	1	5
1	5	6	3	2	4

ROUND 08	Circle of Sudoku	
Team round	45 minutes 17:00 – 17:45	1800 points

- | | | |
|-----|---------------------------|-------------------|
| 1. | Renban Sudoku | 180 points |
| 2. | Anti-XV Group Sudoku | 180 points |
| 3. | Fortress Sudoku | 180 points |
| 4. | All even / all odd Sudoku | 180 points |
| 5. | Classic Sudoku | 180 points |
| 6. | Classic Sudoku | 180 points |
| 7. | All even / all odd Sudoku | 180 points |
| 8. | Fortress Sudoku | 180 points |
| 9. | Anti-XV Group Sudoku | 180 points |
| 10. | Renban Sudoku | 180 points |

Overview

[Round designed by Gyula Slenker & Zoltán Horváth]

This round features ten Sudoku puzzles drawn from five different genres. The puzzles are linked by local Mastermind rules. Each clue shown between two grids indicates how many digits are the same in the first three cells on both sides, though not necessarily in the same positions.

Scoring

Sudokus with 1-5 wrong cells worth 60%.

Time Bonus

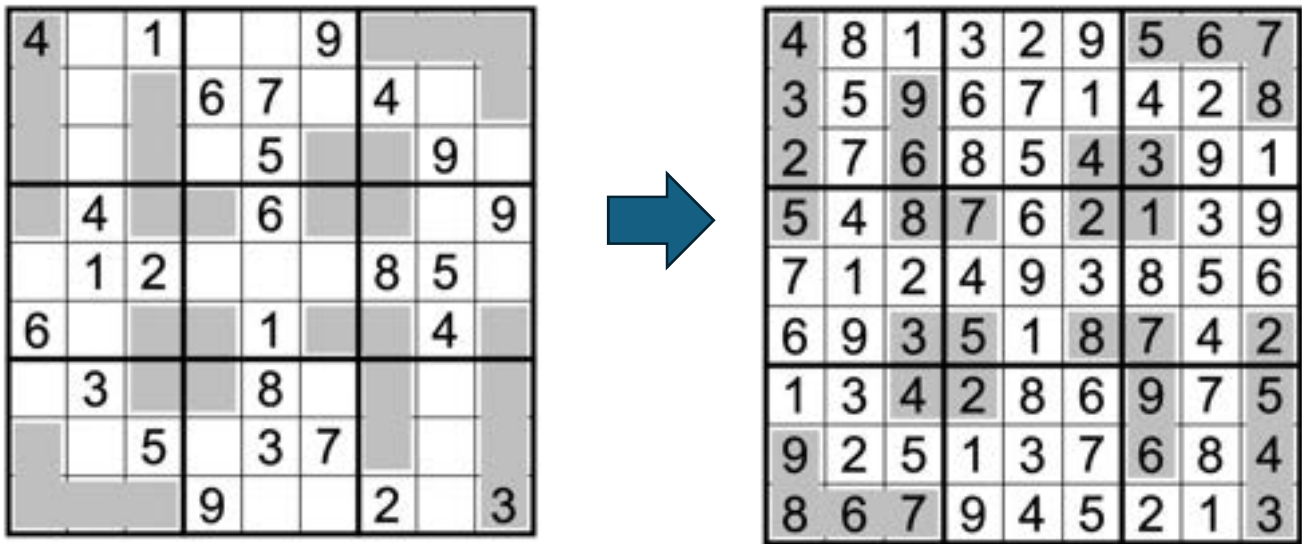
The team receives the full time bonus if they solve all the puzzles correctly. They receive a 60% time bonus if they correctly solve at least eight puzzles and the remaining two also deserve partial points.

The positions of the ten puzzles:

Renban Sudoku	Anti-XV Group Sudoku	Fortress Sudoku	All even / all odd Sudoku
Classic Sudoku			Classic Sudoku
All even / all odd Sudoku	Fortress Sudoku	Anti-XV Group Sudoku	Renban Sudoku

Sudoku 01,10 – Renban Sudoku

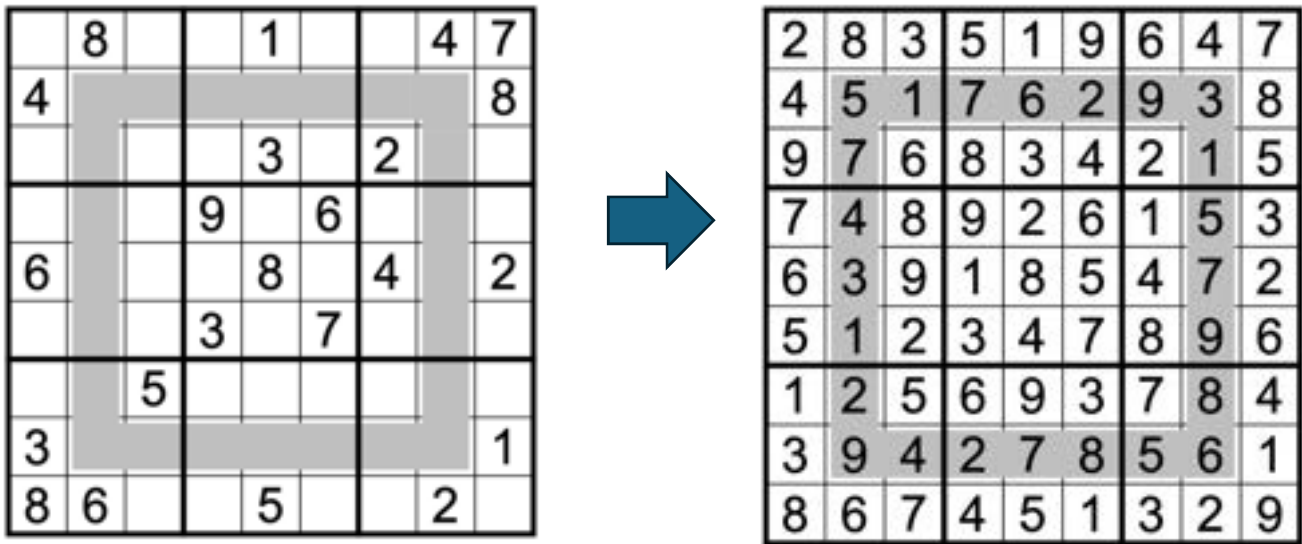
Standard sudoku rules apply. Additionally, each grey region contains a set of consecutive digits, with no constraint on the order of digits.



Example from Sudoku GP 2014-R1 IB

Sudoku 02,09 – Anti-XV Group Sudoku

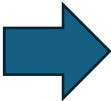
Standard Sudoku rules apply. In addition, every digit in a shaded cell must not form a sum of 5 or 10 with any of its orthogonal neighbors, regardless of their color.



Sudoku 03,08 – Fortress Sudoku

Standard sudoku rules apply. Additionally, each digit in a shaded cell must be larger than any digit in an unshaded cell that it shares an edge with.

	8			4				1
9			6		3			
		2				3		
	3						1	
8								4
	5						2	
		3				5		
			1		2			6
2				5			8	



3	8	5	9	4	7	2	6	1
9	1	7	6	2	3	4	5	8
4	6	2	8	1	5	3	9	7
7	3	4	2	8	6	9	1	5
8	2	1	5	3	9	6	7	4
6	5	9	4	7	1	8	2	3
1	9	3	7	6	8	5	4	2
5	4	8	1	9	2	7	3	6
2	7	6	3	5	4	1	8	9

Example from Sudoku GP 2014-R6 IB

Sudoku 04,07 – All even / all odd Sudoku

Standard sudoku rules apply. Additionally, each grey region are either all odd or all even.

			4	9	5			
		3				6		
	2							7
1								3
			1	6	3			
5								7
	1							5
		8				3		
			2	1	8			



6	8	7	4	9	5	2	3	1
4	5	3	7	2	1	6	8	9
9	2	1	3	8	6	4	7	5
1	4	9	5	7	2	8	6	3
8	7	2	1	6	3	5	9	4
5	3	6	8	4	9	1	2	7
2	1	4	6	3	7	9	5	8
7	6	8	9	5	4	3	1	2
3	9	5	2	1	8	7	4	6

Sudoku 05,06 – Classic Sudoku

Standard sudoku rules apply.

Example is available in Round 02.

Here is an example with four sudoku puzzles to demonstrate the Mastermind rules:

Renban Sudoku

			4	2				②
	8						1	
3								7 ②
	9						5	
8			6		1			4 ①
	4						2	
5								2 ①
	3						4	
			1		8			①
②	①	①	①	②				

Anti XV Group Sudoku

	4		9	2		7		
	3						8	
1	2		4		8		9	6
			3	9	6			
			8	2	4			
4	8		6		9		1	7
	1						5	
	9		7		1		4	
①	①	②	①	②				

6			7	5			3	①
5	2						1	6 ①
			3	6				①
			6	2				②
3	5						2	1 ②
			5	1				
			1	9				①
9	1						7	5 ②
8			4	7				9
②	①	①	①	②				

	7						6	
	4						1	
			9	8				
1			4	6				2
3			2	7				8
			6	1				
	6						7	
	1						8	
②	①	②	①	②				

Fortress Sudoku

All even / all odd Sudoku



7	6	1	4	3	2	9	8	5	②	5	4	8	9	6	2	3	7	1	
9	8	2	7	5	6	4	1	3		6	3	9	5	1	7	4	8	2	
3	5	4	8	1	9	2	6	7	②	1	2	7	4	3	8	5	9	6	
6	9	3	2	4	7	1	5	8		8	7	4	3	9	6	1	2	5	
8	2	5	6	9	1	3	7	4	①	9	6	2	1	7	5	8	3	4	
1	4	7	5	8	3	6	2	9		3	5	1	8	2	4	7	6	9	
5	1	8	3	6	4	7	9	2	①	4	8	3	6	5	9	2	1	7	
2	3	6	9	7	5	8	4	1		7	1	6	2	4	3	9	5	8	
4	7	9	1	2	8	5	3	6	①	2	9	5	7	8	1	6	4	3	
②	①	①	①	②						①	①	②	①	②					
6	9	1	7	2	5	4	8	3	①	8	7	2	1	5	3	9	6	4	
5	2	3	9	4	8	7	1	6		9	4	5	7	6	2	8	1	3	
4	7	8	3	1	6	9	5	2	①	6	3	1	9	4	8	5	2	7	
1	8	9	6	3	2	5	4	7		1	5	8	4	9	6	7	3	2	
3	5	7	8	9	4	6	2	1	②	7	2	6	8	3	5	1	4	9	
2	4	6	5	7	1	3	9	8		3	9	4	2	1	7	6	5	8	
7	3	5	1	8	9	2	6	4	①	4	8	7	6	2	1	3	9	5	
9	1	4	2	6	3	8	7	5		5	6	9	3	8	4	2	7	1	
8	6	2	4	5	7	1	3	9	②	2	1	3	5	7	9	4	8	6	

ROUND 09		The Patchwork Challenge
Team round	45 minutes 18:00 – 18:45	1800 points

1-9. Patchwork Sudoku **200 points each**

Overview

[Round designed by Zoltán Horváth]

This round consists of 9 incomplete sudokus, each with numbers given in only three regions, which are marked with a grey background. In addition, players receive 54 extra “patchwork pieces” of 6 different types.

The players will receive 15 A4 sheets in an envelope. Nine of them contain the sudokus to be solved, numbered from 1 to 9, and the remaining six contain the patchwork pieces, labeled from A to F.

The task of the teams is to fill the empty regions of the 9 sudokus in such a way that each of the 6 types appears exactly once in every puzzle, ensuring that all 9 sudokus have a unique solution.

The positions of the patchwork pieces are uniquely determined by the borders drawn on the edges; each piece can only be placed in its designated position within a puzzle, without rotation or reflection. This also means that the 9 sudokus each contain the same type of element, but in different positions.

Most patchwork pieces do not have a unique solution on their own.

Note: Pieces of the same patchwork type are presented together on one page, but they are independent and do not form a valid sudoku on their own.

Scoring

Each correctly filled 3×3 region that matches the official solution is worth 10% of the indicated score, while a completely correct puzzle yields the full score.

Time Bonus

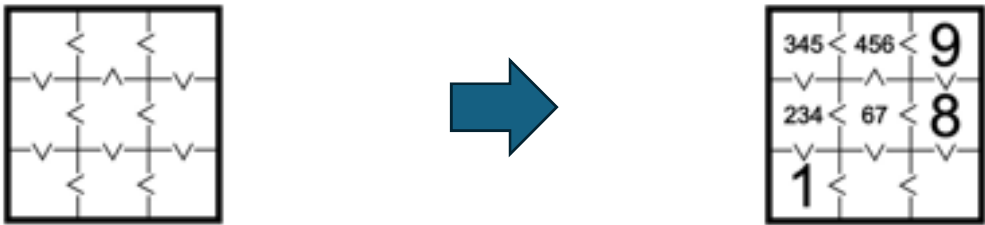
The team receives the full time bonus if they solve all the puzzles correctly. They receive a 60% time bonus if they correctly solve at least seven puzzles and the remaining two are at least 50% correct.

See the examples of partially solvable patchwork pieces below.

Note: There are no markings along the region borders.

Patchwork A – Relation pieces

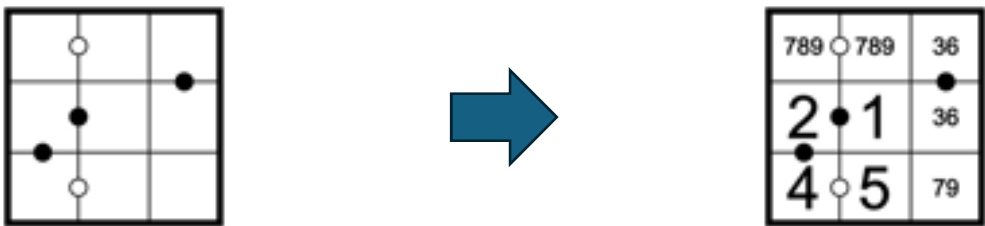
Fill the grid with the digits 1 to 9, each used exactly once, so that all given inequality signs are satisfied.



Patchwork B – Inside Kropki pieces

Fill the grid with the digits 1 to 9, each used exactly once.

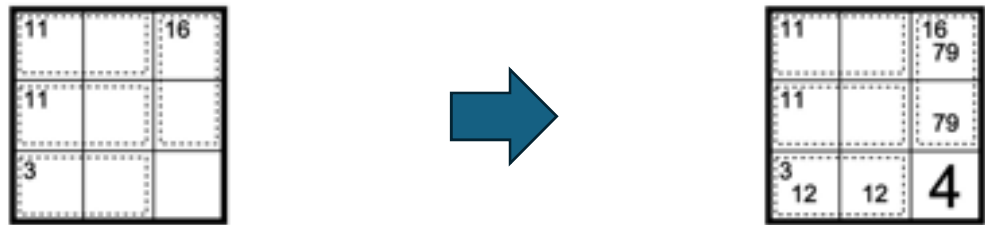
Additionally, if absolute difference between two digits in neighboring cells equals 1, then those cells are separated by a white dot. If a digit in a cell is half of the digit in a neighboring cell, then those cells are separated by a black dot. All possible dots **within each 3x3 region** are given, but the dot between 1 and 2 can be either white or black.



Patchwork C – Killer pieces

Fill the grid with the digits 1 to 9, each used exactly once.

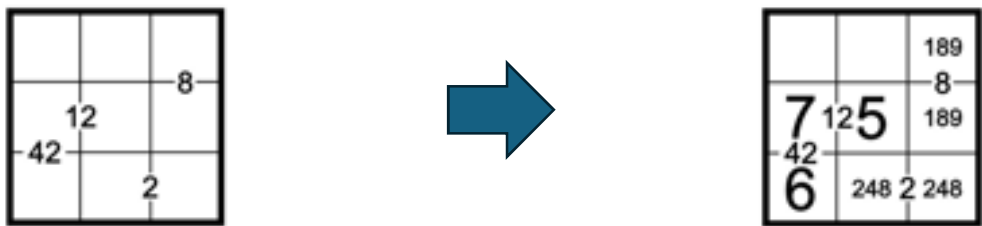
Additionally, the sum of the numbers in each cage must equal the value given in the upper-left corner of that cage.



Patchwork D – Math pieces

Fill the grid with the digits 1 to 9, each used exactly once.

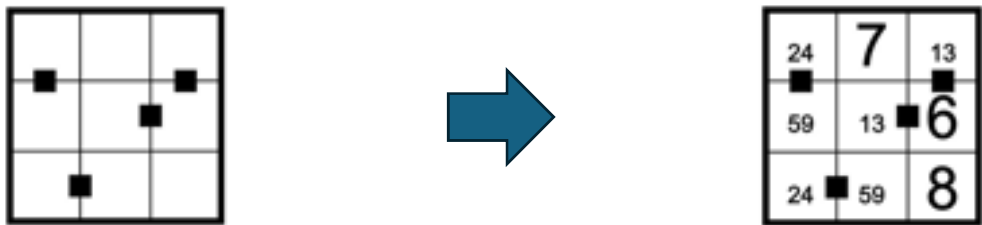
Additionally, in each region, four integers are given, representing the sum, difference, product, or quotient of two adjacent cells. Each of the four operations appears exactly once.



Patchwork E – Inside Square pieces

Fill the grid with the digits 1 to 9, each used exactly once.

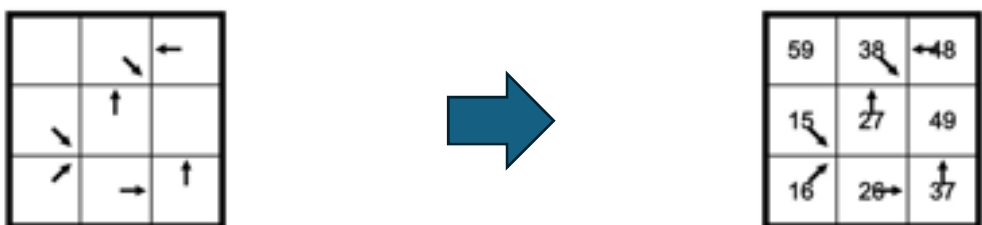
Additionally, a square marks any two adjacent digits that, read left-to-right or top-to-bottom, form a two-digit square number. **Within each 3×3 region**, all possible squares are given.



Patchwork F – Inside Next-to pieces

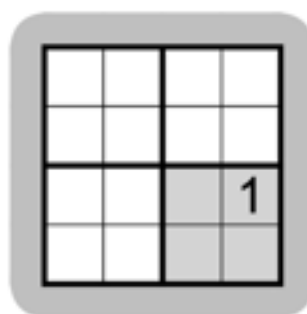
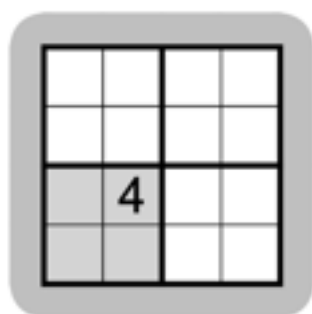
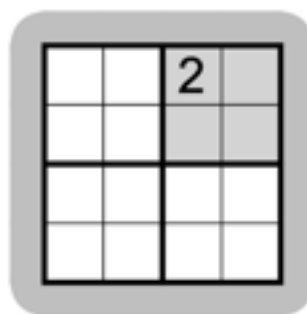
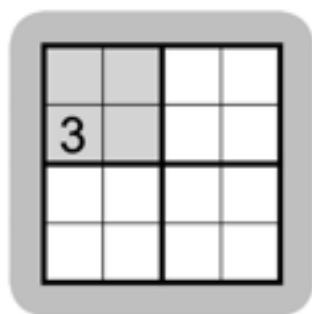
Fill the grid with the digits 1 to 9, each used exactly once.

Additionally, if a cell contains the digit N and has an arrow, then the digit N+1 must appear in one of the cells indicated by the arrow within the same 3×3 region (not necessarily adjacent to the arrow cell). Not all possible arrows are shown.

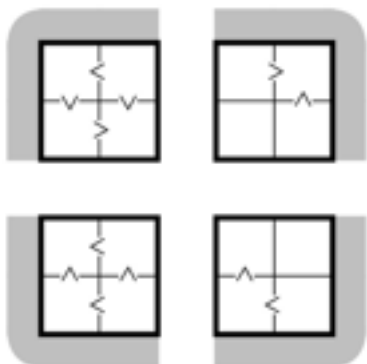


Here is an example with four Sudoku puzzles and three types of patchwork pieces.

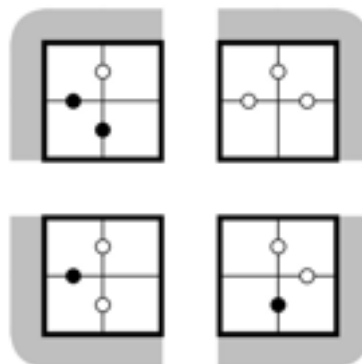
Patchwork Sudoku 01-04



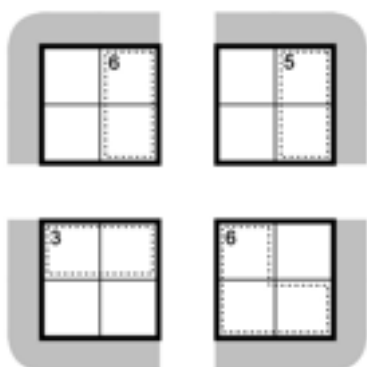
Patchwork A – Relation

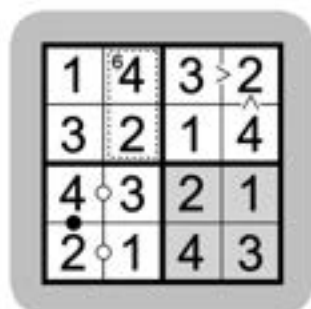
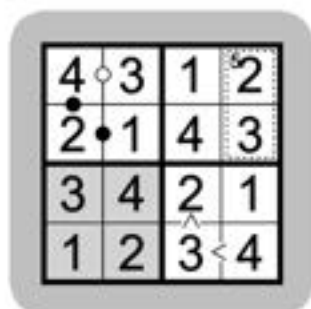
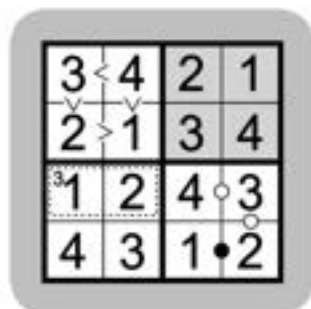
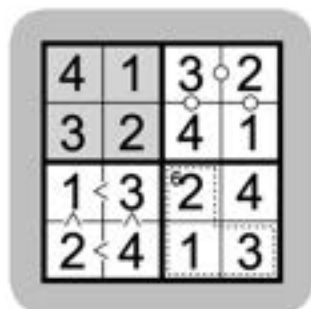
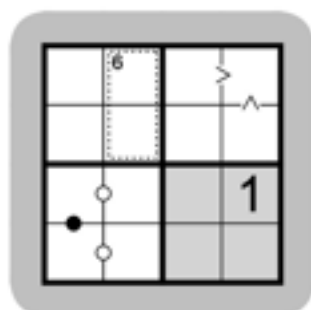
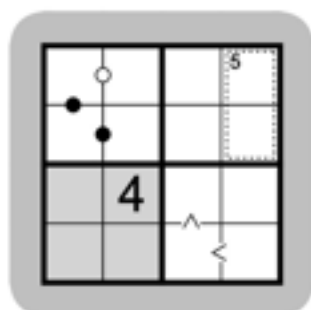
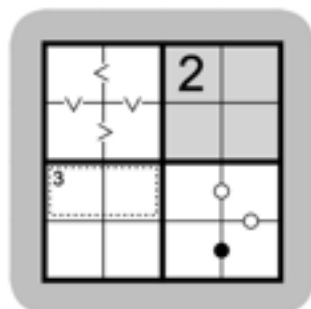
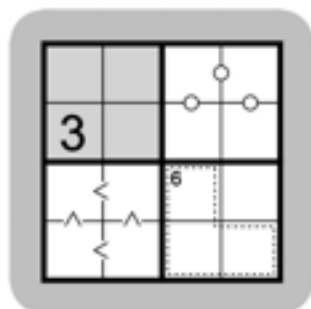


Patchwork B – Inside Kropki



Patchwork C – Killer





ROUND 10	Classic Uphill	
Individual round	40 minutes 09:00 – 9:40	400 points

Classic Sudoku	25 points	25 points	25 points
	25 points	30 points	30 points
	30 points	35 points	35 points
	40 points	45 points	55 points

Sudoku 01-12 – Classic Sudoku

[Gyula Slenker, Károly Kresz]

See the instructions and example in Round 2.

ROUND 11		The Sudoku Pyramid	
Individual round		40 minutes 09:45 – 10:25	300 points

- | | | |
|----|--------------------|-------------------|
| 1. | Pyramid Sudoku 6x6 | 45 points |
| 2. | Pyramid Sudoku 7x7 | 65 points |
| 3. | Pyramid Sudoku 8x8 | 85 points |
| 4. | Pyramid Sudoku 9x9 | 105 points |

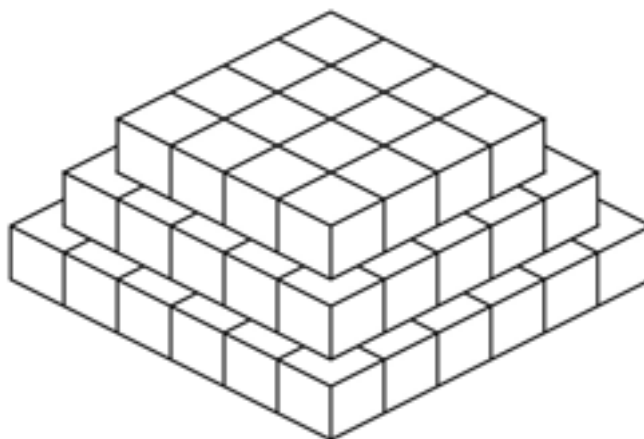
Overview

[Round designed by Viktor Samu & Gyula Slenker]

This round consists of four connected Sudoku puzzles, both standard and irregular, ranging in size from 9×9 down to 6×6. Each puzzle uses digits from 1 to N, where N corresponds to the size of the grid.

The four Sudokus are arranged in a pyramid: the bottom layer is 9×9, with an 8×8 puzzle above it, and so on. Starting from the second layer, each cell is centered over a 2×2 block of cells in the layer below. The number in that cell must match one of the four digits in the block beneath it.

This is an illustration of the example pyramid:



On each layer, except the top, certain spaces have been left at the vertices of 2×2 blocks. Their use is optional.

Scoring

For a completely solved sudoku, the indicated score is awarded. Otherwise, the score is calculated as correct cells minus incorrect cells, but no sudoku can receive less than 0 points.

Pre-filled or left blank cells are not counted as either correct or incorrect.

2			
	4		
		3	
			2

			4	
		2		
	1			

			5		
		6		3	
	3				1
5				2	
	2		6		
		3			



2	1	4	3
3	4	2	1
1	2	3	4
4	3	1	2

1	5	4	3	2
2	3	1	4	5
3	4	2	5	1
5	1	3	2	4
4	2	5	1	3

3	1	4	5	6	2
2	5	6	1	3	4
6	3	2	4	5	1
5	4	1	3	2	6
1	2	5	6	4	3
4	6	3	2	1	5

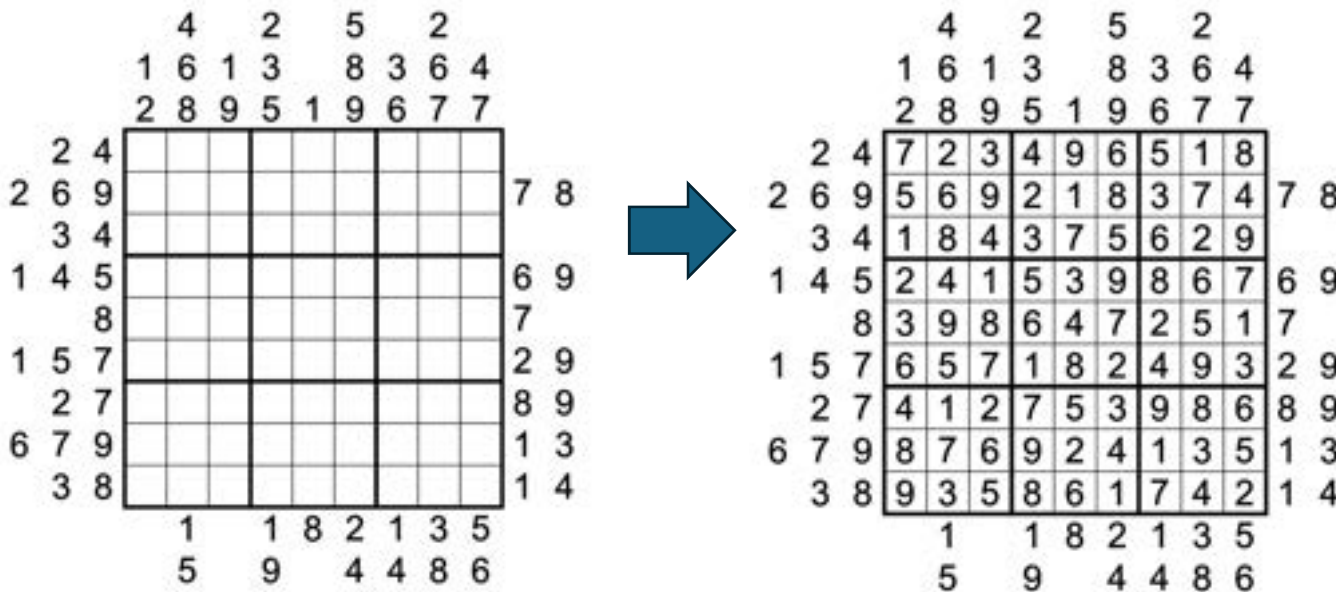
ROUND 12	Sudoku Mix	
Individual round	80 minutes 10:40 – 12:00	800 points

- | | | |
|-----|-----------------------------|------------------|
| 1. | Outside 234 Sudoku | 80 points |
| 2. | Classic Sudoku | 30 points |
| 3. | Diagonal Sudoku | 45 points |
| 4. | Relation Even / Odd Sudoku | 15 points |
| 5. | Rossini Sudoku | 45 points |
| 6. | Shape Sudoku | 30 points |
| 7. | Battenburg Sudoku | 30 points |
| 8. | Sequences Sudoku | 40 points |
| 9. | Tile Sudoku | 30 points |
| 10. | Ten Box Sudoku | 45 points |
| 11. | Termination Sudoku | 85 points |
| 12. | Sudokuro | 55 points |
| 13. | Self-Joint Sudoku | 20 points |
| 14. | Pole Position Sudoku | 35 points |
| 15. | Fraction Sudoku | 65 points |
| 16. | Sequence Top-bottom Sudoku | 55 points |
| 17. | Plus-Minus Sudoku | 45 points |
| 18. | Coded Pointing Evens Sudoku | 50 points |

Sudoku 01– Outside 234 Sudoku [80 points]

[Gyula Slenker]

Standard sudoku rules apply. Additionally, any digit given outside the grid must appear in the 2nd, 3rd or 4th cell of that row or column, starting from that direction.



Example from Sudoku GP 2023-R1 IB

Sudoku 02– Classic Sudoku [30 points]

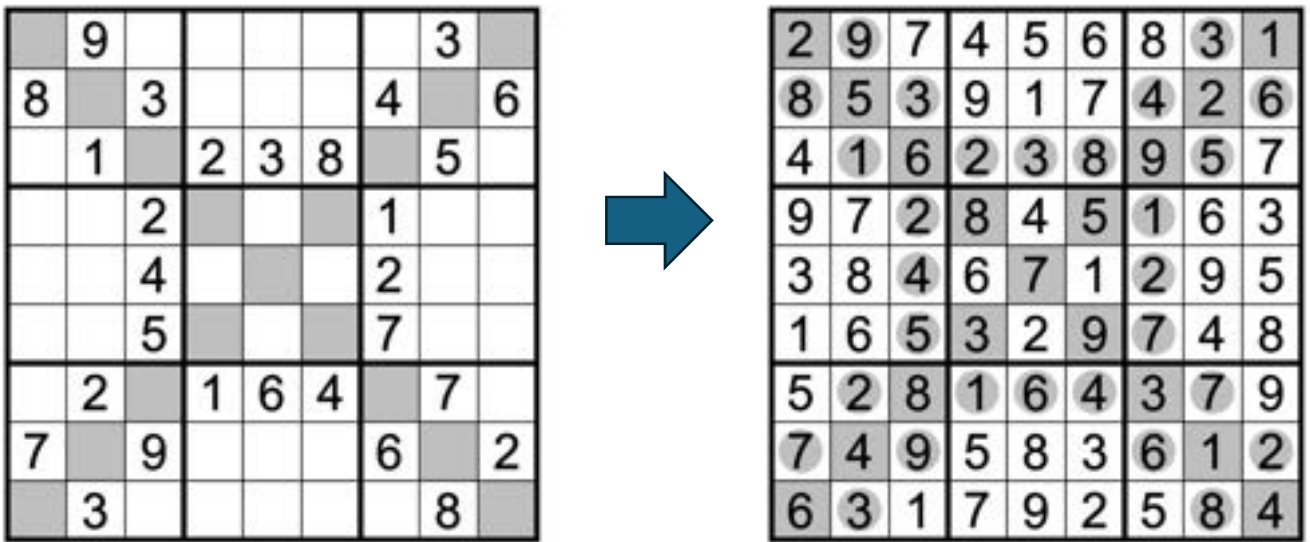
[Gyula Slenker]

Standard sudoku rules apply.

Sudoku 03 – Diagonal Sudoku [45 points]

[Gyula Slenker]

Standard sudoku rules apply. Additionally, each digit appears exactly once in the two main diagonals.

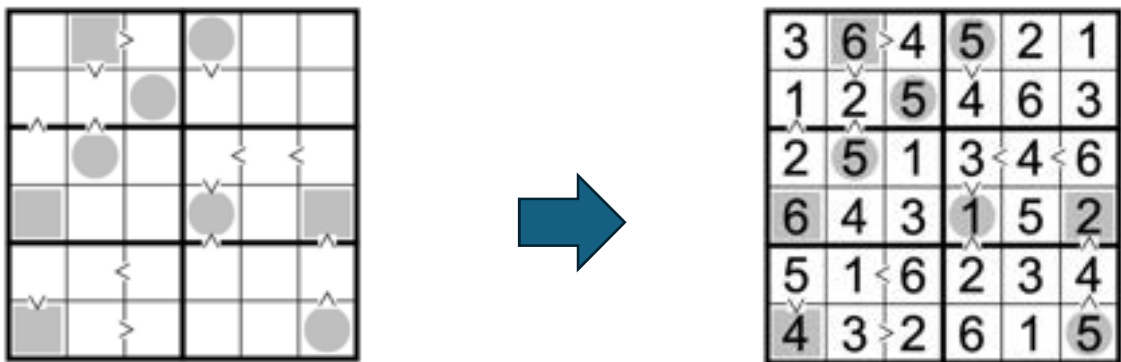


Example from Sudoku GP 2024-R1 IB

Sudoku 04 – Relation Even / Odd Sudoku [15 points]

[Gyula Slenker]

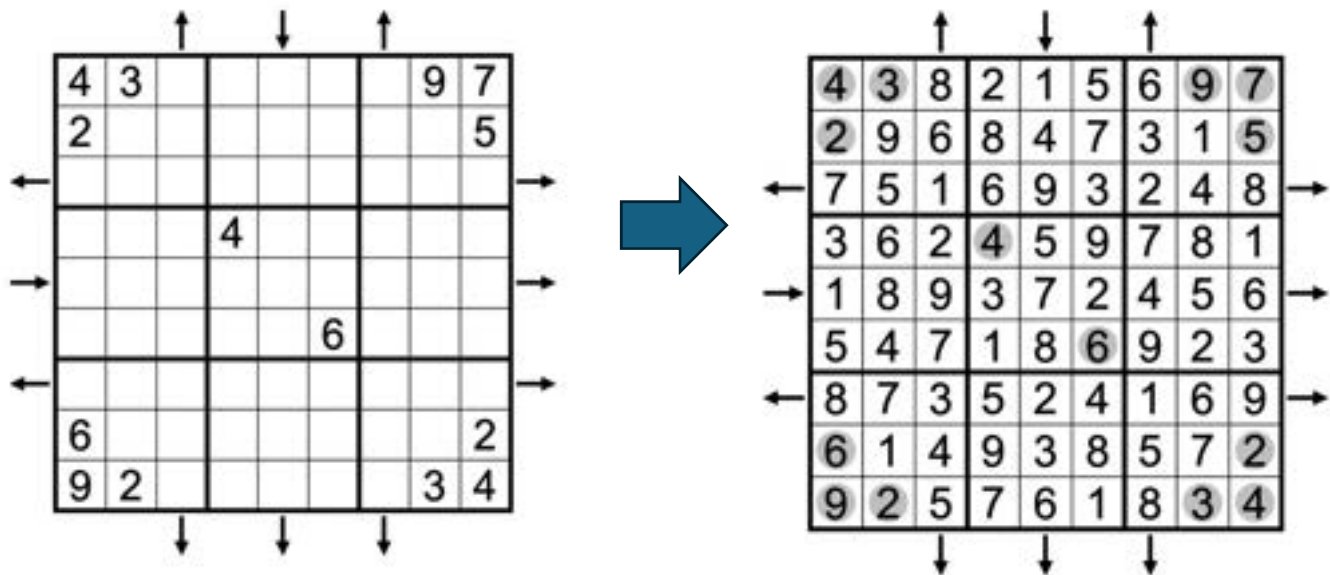
Standard sudoku rules apply. Additionally, all digits should follow the given inequality sign, and cells with a square contain an even number; cells with a circle contain an odd number.



Sudoku 05 – Rossini Sudoku [45 points]

[Károly Kresz]

Standard sudoku rules apply. Additionally, arrows outside the grid indicate if the first three numbers are in ascending or descending order. The arrow points towards the highest number in the series. If no arrows outside the grid are given, the first three numbers can be in neither ascending nor descending order.



Example from IB of WSC 2023

Sudoku 06 – Shape Sudoku [30 points]

[László Osvalt]

Standard sudoku rules apply. Additionally, there are some numbered shapes that must be put into the grid. Shapes can be rotated, but cannot be reflected.

Example is available in Round 01.

Sudoku 07 – Battenburg Sudoku [30 points]

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, everywhere a 2x2 square forms a Checkerboard pattern of Odd and Even digits a Battenburg marking is given. All possible Battenburg markings have been given.

Example is available in Round 03.

Sudoku 08 – Sequences Sudoku [40 points]

[Viktor Samu]

Standard sudoku rules apply. Additionally, the digits along each marked line between two circles must form an arithmetic sequence in the correct order. The lines do not intersect.

8	6			2				3
4	1						6	
						9		
9				6				8
7	8						9	5
6	5			8			7	1

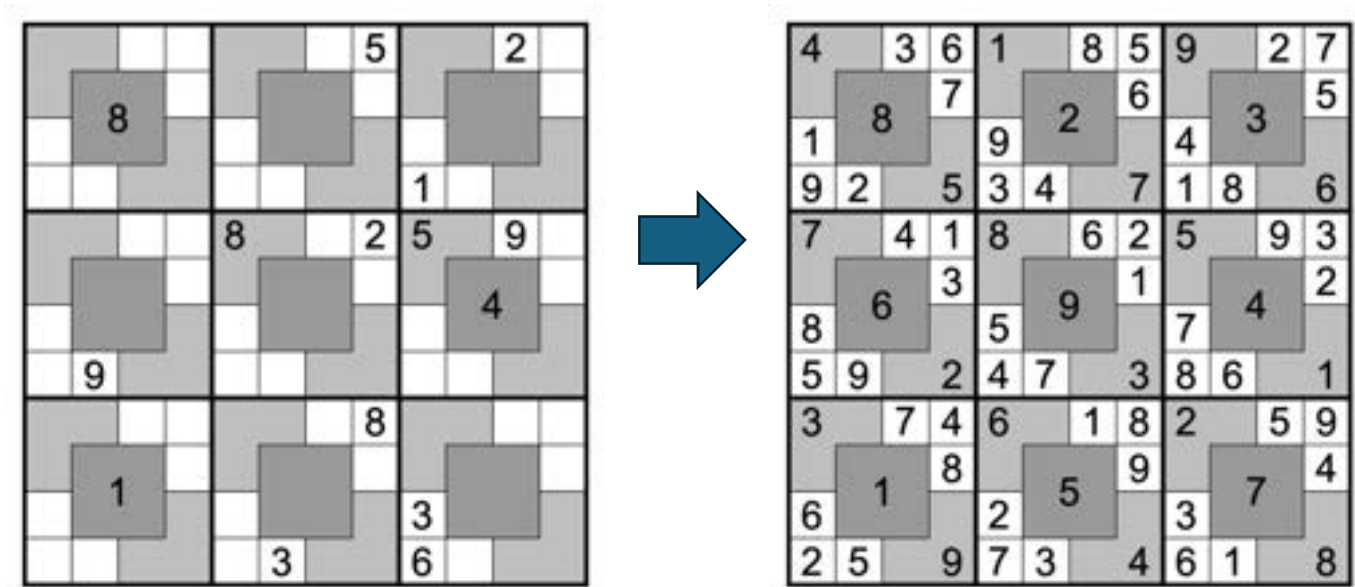


8	6	9	4	2	5	7	1	3
4	1	3	7	9	8	5	6	2
2	7	5	6	1	3	9	8	4
5	4	6	8	7	2	1	3	9
9	3	7	5	6	1	4	2	8
1	2	8	9	3	4	6	5	7
3	9	2	1	5	7	8	4	6
7	8	1	2	4	6	3	9	5
6	5	4	3	8	9	2	7	1

Sudoku 09 – Tile Sudoku [30 points]

[Ashish Kumar]

Standard sudoku rules apply. Additionally, some cells are shaded and belong to multiple rows and/or columns.

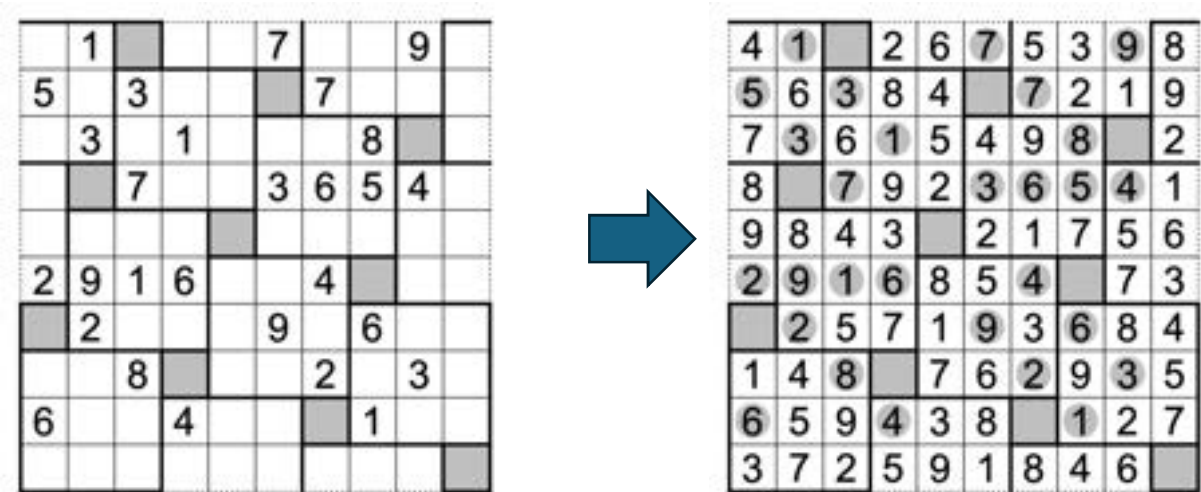


Example from IB of WSC 2023

Sudoku 10 – Ten Box Sudoku [45 points]

[Gyula Slenker]

Standard Sudoku rules, but the grid is toroidal (i.e. “wraps around on itself”) with the left and right edges joined, as well as the top and bottom edges. Some bold 3×3 regions can be split across two different sides of the puzzle. Black squares do not get filled but rows and columns continue across them.

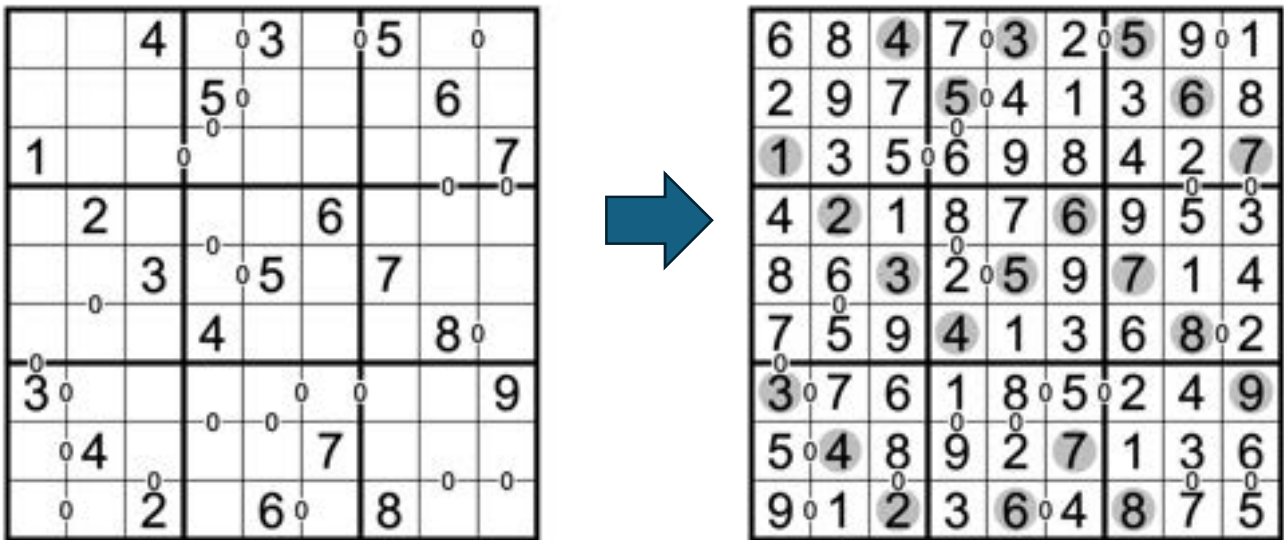


Example from IB of WSC 2023

Sudoku 11 – Termination Sudoku [85 points]

[Gyula Slenker]

Standard Sudoku rules apply. Additionally when two adjacent cells contain numbers where the sum or the product of two numbers ends in digit 0, a marked “0” is placed on the wall. All possible “0” is given.

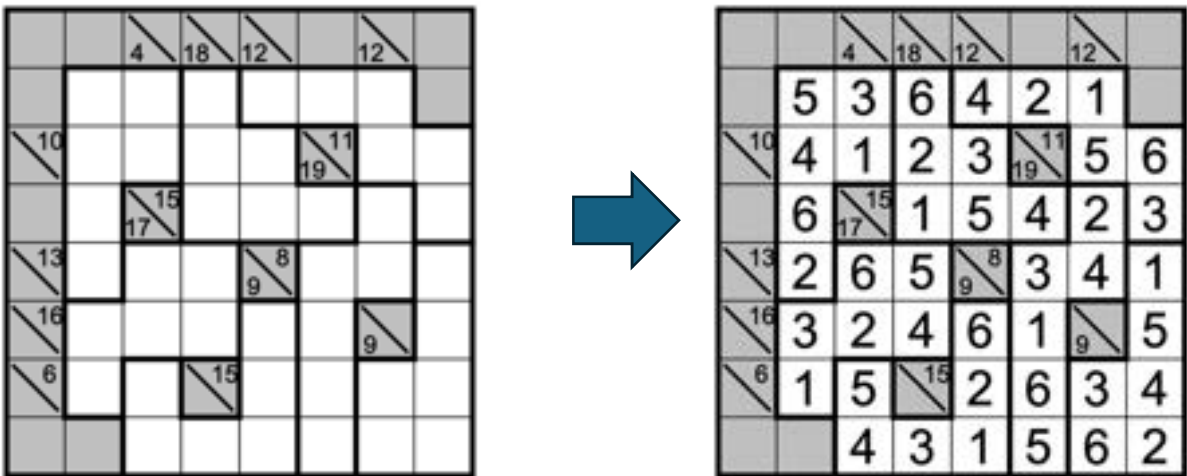


Example from IB of WSC 2024

Sudoku 12 – Sudokuro [55 points]

[Pál Madarassy]

Standard Irregular Sudoku rules apply. Additionally numbers written in grey cells indicate the sum of the digits to their right or downward, up to the next grey cell or the edge of the grid.

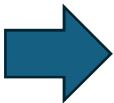


Sudoku 13 – Self-Joint Sudoku [20 points]

[Ashish Kumar]

Standard Sudoku rules apply. Additionally all 3×3 regions are numbered from 1 to 9 from the first cell to the last cell; if a number has the same numerical value as its position in any region, the cell is marked with gray, otherwise, it's white. All gray cells are given.

8	3						4	9
9	1			5			8	2
				7				
			6		7			
	9	1				4	7	
			4		1			
				4				
5	7			6			9	1
1	6						3	4



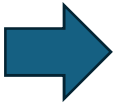
8	3	7	2	1	6	5	4	9
9	1	6	3	5	4	7	8	2
2	4	5	9	7	8	3	1	6
4	5	3	6	9	7	1	2	8
6	9	1	5	8	2	4	7	3
7	2	8	4	3	1	9	6	5
3	8	2	1	4	9	6	5	7
5	7	4	8	6	3	2	9	1
1	6	9	7	2	5	8	3	4

Sudoku 14 – Pole Position Sudoku [35 points]

[Ashish Kumar]

Standard Sudoku rules apply. Additionally the digit in the first cell of each row or column specifies the position of the digit 1 within that row or column.

	5		9					
		9	6	7				
	8	3	4					
		2		8		4		
					9	5	8	
				9	4	8		
				7		3		



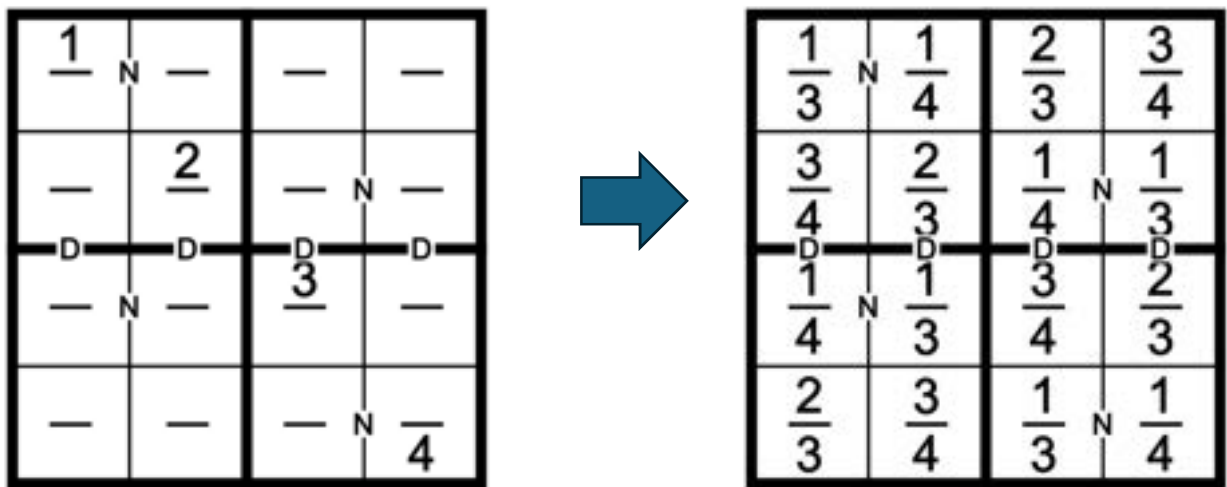
6	3	7	8	4	1	9	2	5
8	5	4	9	3	2	7	1	6
2	1	9	6	7	5	3	4	8
5	8	3	4	1	6	2	7	9
9	7	2	5	8	3	4	6	1
1	4	6	7	2	9	5	8	3
3	6	1	2	9	4	8	5	7
4	9	8	1	5	7	6	3	2
7	2	5	3	6	8	1	9	4

Sudoku 15 – Fraction Sudoku [65 points]

[Gyula Slenker]

Put numbers $\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ and $\frac{4}{5}$ instead of 1-9, so that each number appears exactly once in each row, column and 3x3 outlined region. Letter N means that numbers in neighbouring cells have the same numerator. Letter D means that numbers in neighbouring cells have the same denominator. All possible letters N and D are given.

Example with numbers $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{4}$.

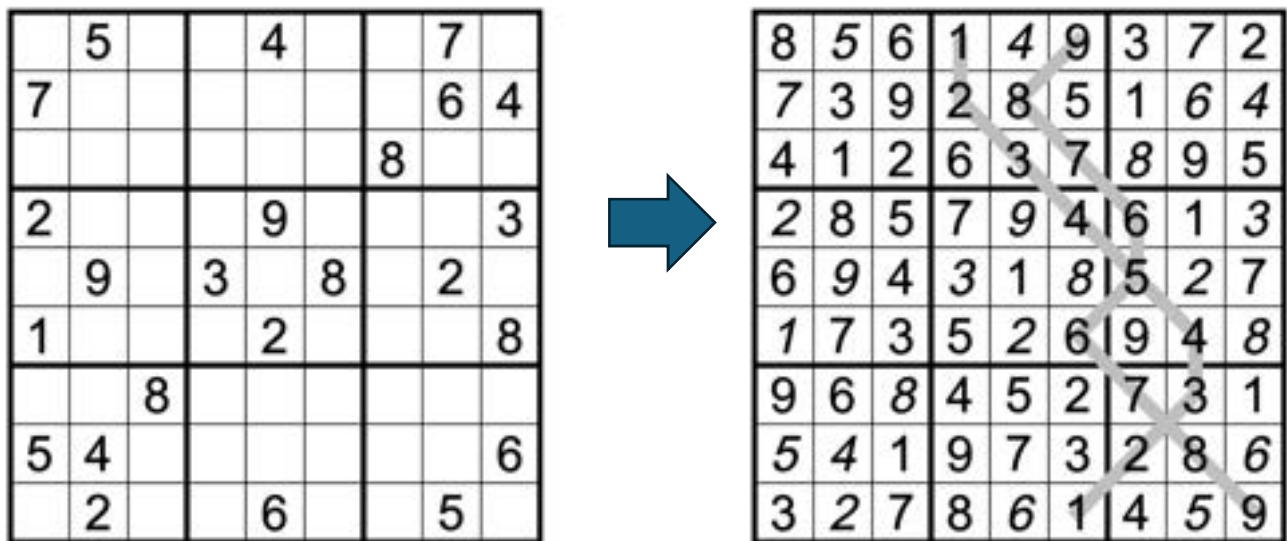


Example from IB of WSC 2022

Sudoku 16 – Sequence Top-Bottom Sudoku [55 points]

[Ashish Kumar]

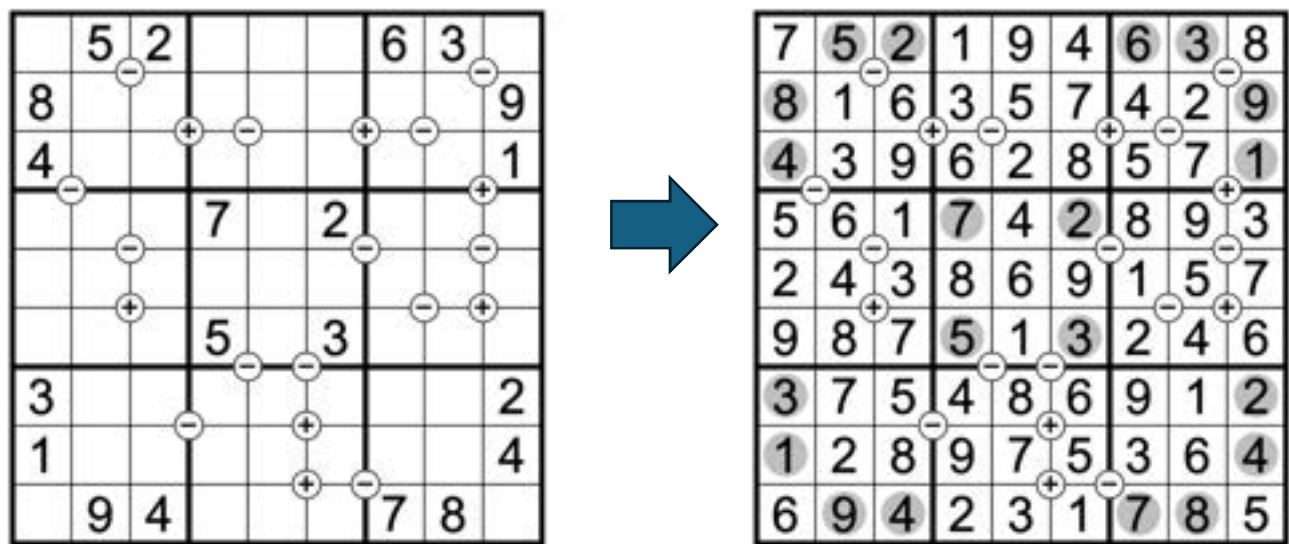
Standard Sudoku rules apply. Additionally, there are two sequences: one running from digit 1 in the top row to digit 9 in the bottom row, and another from digit 1 in the bottom row to digit 9 in the top row. Each sequence must consist of consecutive numbers, with each number touching the next either by side or corner.



Sudoku 17 – Plus-Minus Sudoku [45 points]

[Gyula Slenker]

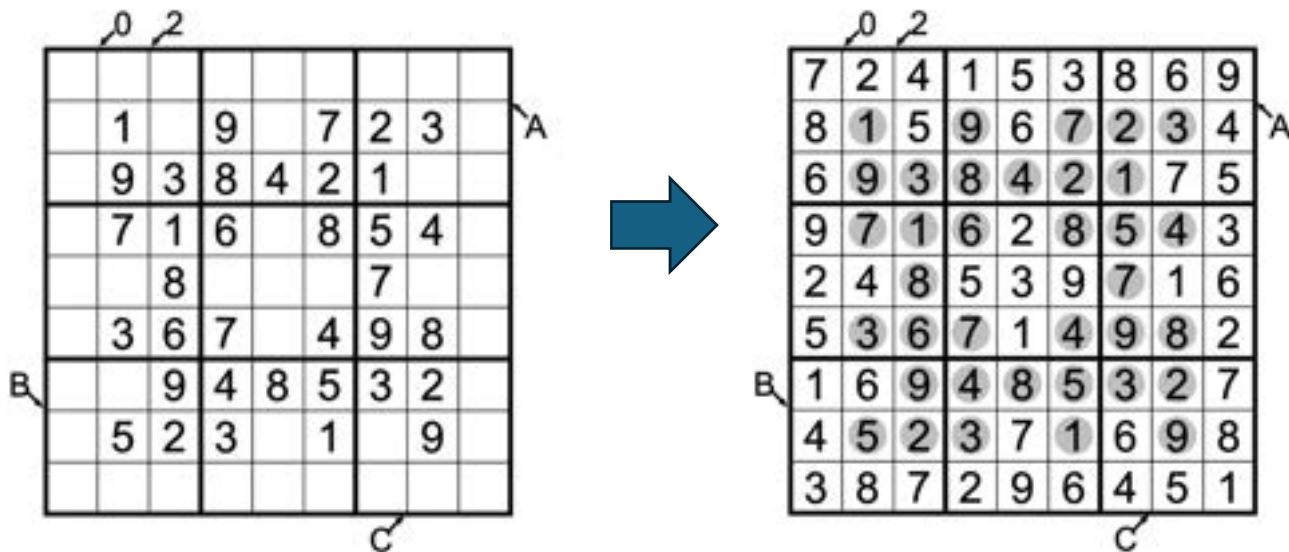
Standard Sudoku rules apply. Additionally, a plus sign at the intersection of four cells means that both diagonally opposite pairs of digits have the same sum. A minus sign means that both pairs have the same difference. Not all possible plus and minus signs are shown.



Sudoku 18 – Coded Pointing Evens Sudoku [50 points]

[György Herke]

Standard Sudoku rules apply. Additionally, arrows outside the grid indicate the number of even digits in the given direction. Some of these clues are replaced with letters: different letters represent different values, and any lettered clue may equal one of the given numbered clues.



Example from Sudoku GP 2021-R4 IB

ROUND 13		Weakest Link Revised
Team round		45 minutes 13:45 – 14:30 1800 points

01-04.	Irregular Sudoku	4 * 75 points
05-08.	Killer Sudoku	4 * 75 points
09-12.	Next to Nine Sudoku	4 * 75 points
13-16.	Difference Sudoku	4 * 75 points
17-20.	Distance Sudoku	4 * 75 points
21-24.	Outside Sudoku	4 * 75 points

Overview

This round is a team medley with very limited communication between team members.

During the round, team members sit around the same table but are not allowed to talk to each other. The only communication permitted is via the provided extra A4 sheet, where players can share marked cells. Booklets must not be exchanged under any circumstances. Writing freely on the shared paper is allowed, but nothing else.

Each team member receives their own booklet, labeled A through D, containing the same six genres in the same order.

The first sudoku can be solved independently. From the second sudoku onwards, exactly six clues are missing. To solve these, players must rely on information from their teammates' previous sudoku, specifically, two clues from each member.

For example, in Booklet C, the first Sudoku puzzle has two cells marked C1 and C2. In the second sudoku, six Killer Sudoku clues are missing, labeled A1, A2, B1, B2, D1 and D2. As you solve this Killer Sudoku, you will uncover C3 and C4, and so on.

You may try to solve any upcoming Sudoku puzzles in your booklet.

Scoring

Sudokus fully solved or with minor mistakes worth points according to the general rules. A correctly solved Sudoku will earn its points even if not all teammates have finished the previous puzzle.

Time Bonus

Teams may only claim the time bonus if all four members complete their booklets.

The team receives the full time bonus if they solve all the puzzles correctly. They receive a 60% time bonus if they correctly solve at least 21 sudokus and the remaining three also deserve partial points.

Sudoku 01-04 – Irregular Sudoku

[Gyula Slenker]

Standard sudoku rules apply. In this variation, the regions are irregularly shaped.

Example is available in Round 05.

Sudoku 05-08 – Killer Sudoku

[Pál Madarassy]

Standard sudoku rules apply. Additionally, the sum of the numbers in each cage must equal the value given in the upper-left corner of that cage. Numbers cannot repeat inside a cage.

Example is available in Round 01.

Sudoku 09-12 – Next to Nine Sudoku

[Gyula Slenker]

Standard sudoku rules apply. Additionally, clues outside the grid indicate the digits that sit next to 9 in that row or column. These clues are given in increasing order. All possible clues are given.

4	3	3	1	1	1	2			
7	6	5	8	4	3	8	4	6	
1									7 8
	2								2 3
		3							1 5
			4						1 5
				5					6 8
					6				5
						7			1 8
							8		5 7
								9	5



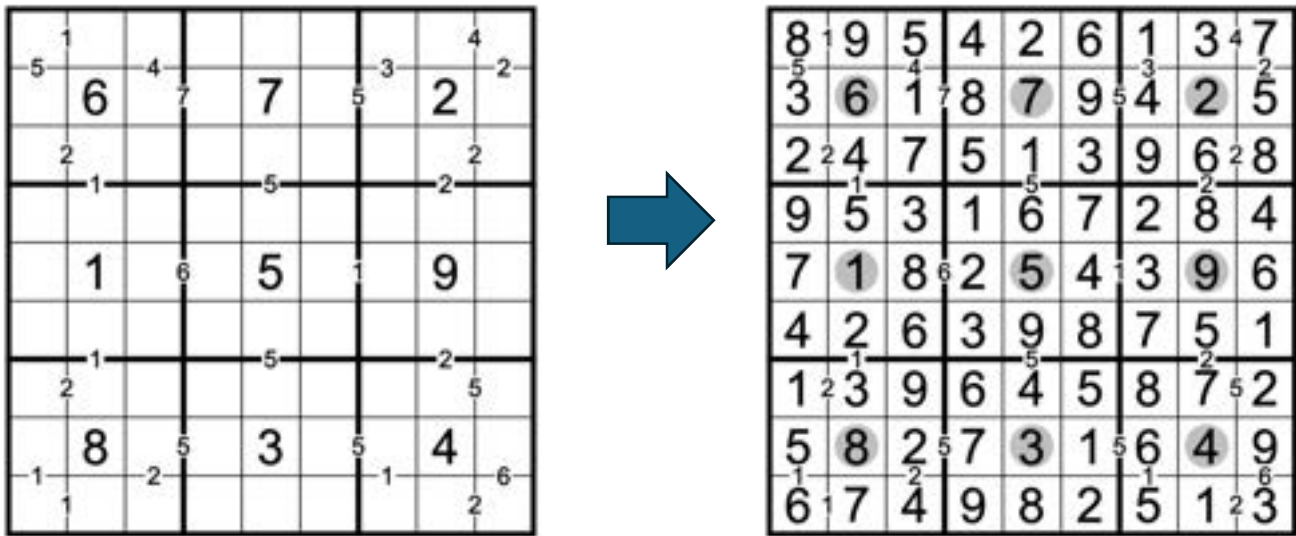
4	3	3	1	1	1	2			
7	6	5	8	4	3	8	4	6	
1	4	5	6	2	8	9	7	3	7 8
6	2	9	3	4	7	8	1	5	2 3
8	7	3	5	9	1	2	6	4	1 5
3	8	6	4	1	9	5	2	7	1 5
7	1	4	2	5	3	6	9	8	6 8
9	5	2	8	7	6	3	4	1	5
4	6	1	9	8	5	7	3	2	1 8
5	9	7	1	3	2	4	8	6	5 7
2	3	8	7	6	4	1	5	9	5

Example from Sudoku GP 2015-R1 IB

Sudoku 13-16 – Difference Sudoku

[György Herke]

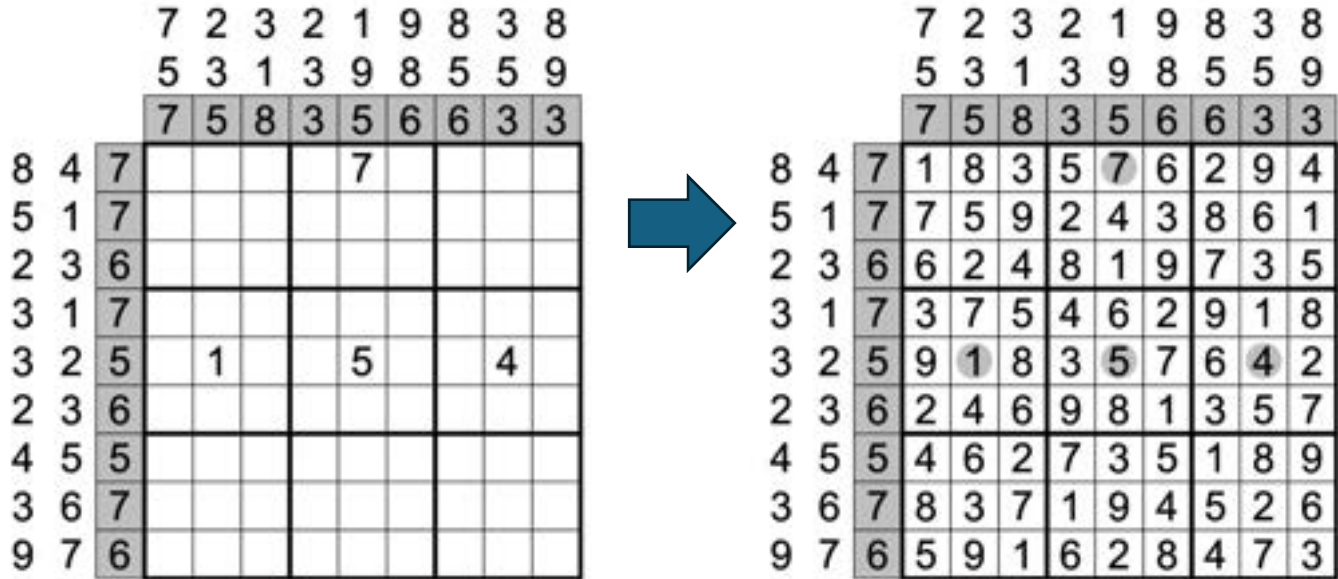
Standard sudoku rules apply. Additionally, the numbers written on the wall indicate the difference between the digits in the two adjacent cells.



Sudoku 17-20 – Distance Sudoku

[Zoltán Horváth]

Standard sudoku rules apply. Additionally, clues outside the grid specify the distance (in cells) between the indicated digits in the corresponding row or column. The digits must appear in the given order.

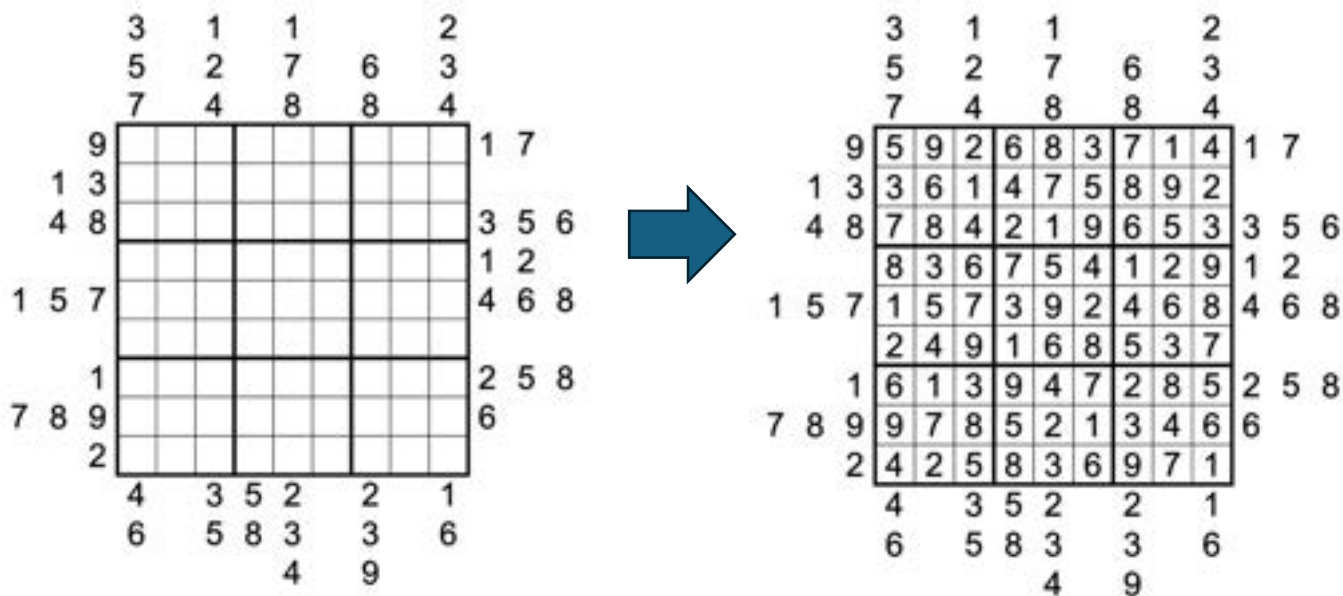


Example from Sudoku GP 2020-R1 IB

Sudoku 21-24 – Outside Sudoku

[Gyula Slenker]

Standard sudoku rules apply. Additionally, any digit given outside the grid must appear within the first three cells of that row or column, starting from that direction.



Example from Sudoku GP 2014-R1 IB

Below is an example of the format of "coded" Difference Sudoku puzzles:



ROUND 14	Utter Chaos	
Team round	45 minutes 14:45 – 15:30	1800 points

Bottom layer	4 * 275 points
Middle layer	4 * 125 points
Top layer	4 * 50 points

Overview

[Round designed by Gyula Slenker & Zoltán Horváth]

This is a manipulative team round.

Each team receives four 9×9 Irregular Sudoku puzzles, also known as Chaos Sudoku. The puzzles will be printed on an A3 sheet in a 2×2 layout. This sheet is referred to as the bottom layer. Additionally, each team receives two smaller sheets, which are called the middle and top layers.

The middle layer fits onto the center of the bottom layer, covering only a 7×7 area of each of the four sudokus rather than the full grid. When placed together, the bottom and middle layers modify all four original Irregular Sudokus, with the middle layer replacing both the numbers and the regional borders with new ones.

The top layer fits onto the center of the middle layer, covering a 5×5 area of each of the four sudokus. When all three layers are combined, the original sudokus are modified once again. Note that the top layer cannot be placed directly on the bottom layer without the middle layer.

It is strictly forbidden to damage the layers; they must remain intact. Any tears or heavy creases that affect solving will result in a 50% penalty.

Scoring

Each fully solved quadrant of a layer is worth the indicated points.

If a quadrant is not entirely correct, all of its cells will be checked, with both correct and incorrect entries counted. The final score is then calculated as (correct entries – incorrect entries) × X, where X equals 4 for the bottom layer, 3 for the middle layer, and 2 for the top layer.

Pre-filled or left blank cells are not counted as either correct or incorrect.

Time Bonus

Teams may only claim the time bonus if all three layers are fully filled.

The team receives the full time bonus if they correctly fill in all three layers. They receive a 60% time bonus if they have between one and ten incorrect or blank cells.

Sudoku 01-04 – Irregular Sudoku

Standard sudoku rules apply. In this variation, the regions are irregularly shaped.

Example is available in Round 05.

Connection rule

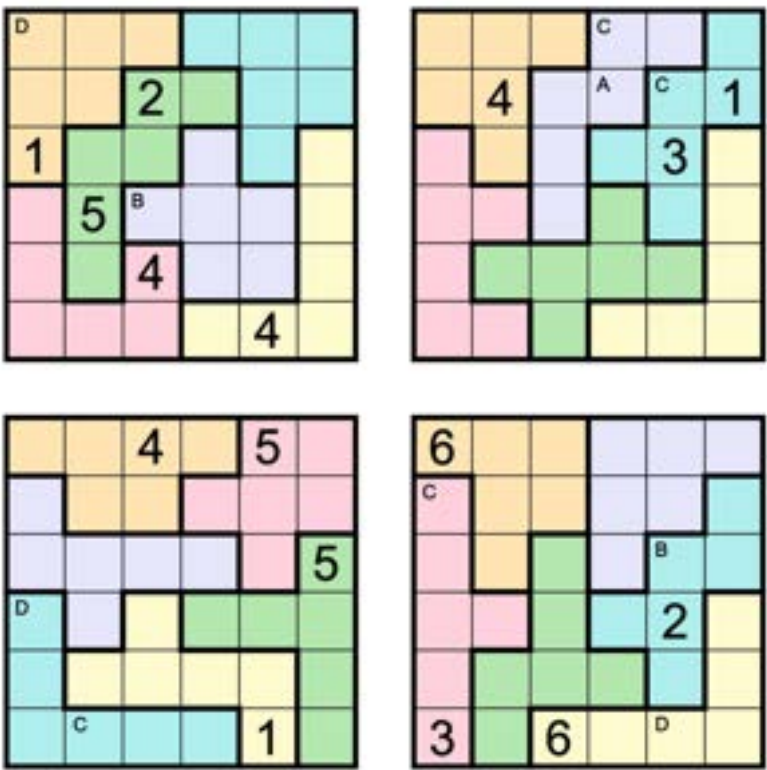
The four sudokus are also linked by letters. Each letter appears exactly four times (not necessarily once in each quadrant), and the four occurrences are either all the same or all different.

Note: For easier solving, we will provide a table of the possible letters, and the spacing between the puzzles will be wider than in the example below.

Here is an example with 6x6 puzzles and with only two layers.

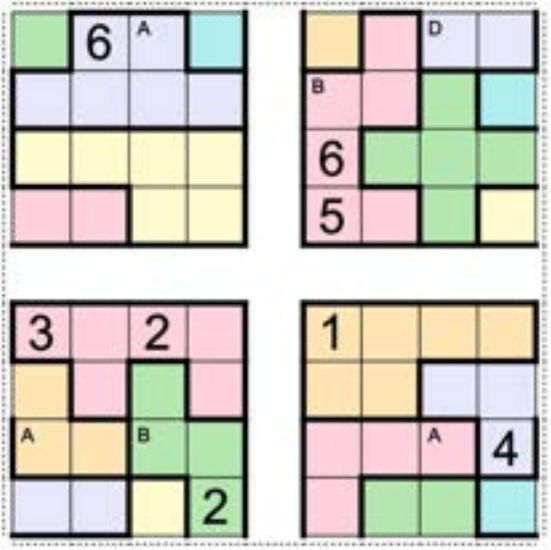
Bottom layer

(Don't cut it)



Top layer

(Cut it only on dotted lines)



A	5	5	5	5
B	1	3	4	6
C	1	2	3	6
D	4	4	4	4

^D 4	2	6	5	1	3
5	3	2	1	6	4
1	4	3	6	2	5
6	5	^B 1	4	3	2
3	6	4	2	5	1
2	1	5	3	4	6

3	6	5	^C 1	2	4
2	4	3	^A 5	^D 6	1
4	1	6	2	3	5
1	2	4	6	5	3
6	5	1	3	4	2
5	3	2	4	1	6

3	6	^A 5	2
4	3	2	1
1	2	4	5
5	4	3	6

1	2	^D 4	6
^B 4	1	6	2
6	5	1	3
5	3	2	4

6	1	4	3	5	2
3	2	5	4	6	1
2	4	1	6	3	5
^D 4	5	3	1	2	6
1	6	2	5	4	3
5	^C 3	6	2	1	4

6	4	3	1	5	2
^D 2	1	5	3	6	4
5	2	1	4	^B 3	6
1	6	4	5	2	3
4	3	2	6	1	5
3	5	6	2	^D 4	1

3	4	2	5
4	1	5	6
^A 5	3	^B 6	1
1	6	3	2

1	6	4	3
5	2	3	1
2	1	^A 5	4
6	4	1	5